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Original Articles.

MULTIPLE CALCIFICATION ("CALCINOSIS") IN THE SUBCUTANEOUS TISSUE.

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THE patient,* a German girl, A. G—., aged 7 years, was admitted to the German Hospital on July the 30th, 1912, on account of the presence of a large number of hard nodules in the subcutaneous tissue of the extremities and the portions of the trunk adjoining the extremities. Most of the nodules are smaller than an average pea, but some of them, especially those on the buttocks and about the knees, are much larger, the larger nodules having apparently arisen by the coalescence of several smaller nodules. The face, head, thorax and abdomen are practically free. On the child's admission to the hospital the skin over one of the nodules was ulcerated, and the skin was inflamed and adherent over one or two others, but the nodules, as a rule, give rise to no pain or tenderness, and seem to have developed without the child being aware of their existence. The lymphatic glands in the groins and right axilla, and some in the neck, are moderately enlarged. The liver and spleen cannot be felt, and the child seems

* The case was shown and described at the Clinical Section of the Royal Society of Medicine on October the 11th, 1912.

to be free from any visceral disease. The urine contains no albumin or sugar. There is no fever. Brachial systolic blood-pressure, 110 mm. Hg. Ophthalmoscopic examination (right eye) shows nothing abnormal. Blood examination (Dr. G. Leopold and Dr. H. Rosenbusch, October the 8th, 1912): Hæmoglobin, 70 per cent.; red cells, 4,070,000 per cubic millimetre of blood; colour index, 0·9; white cells (after a meal), 11,200 per cubic millimetre of blood. The differential count of the white cells gives: Polymorphonuclear neutro-

FIG. 1.—Skiagram of the pelvis and upper part of thighs to show the numerous subcutaneous calcareous concretions, especially about the hips.

philes, 65 per cent.; small lymphocytes, 27 per cent.; large lymphocytes, 2 per cent.; large mononuclears, 3 per cent.; transitionals, 2 per cent.; eosinophiles, 1 per cent.; mast-cells, none in the count. The red blood-corpuscles appear normal. The coagulation time (estimated by Sir A. E. Wright's tubes, at 25° C.) was about three minutes. On October the 7th, 1912, Dr. G. R. Ward kindly estimated the calcium index of the blood by W. Blair Bell's method, and found it to be 1·36, as against a normal average of about 0·9.

According to the history obtained, the presence of hard subcutaneous nodules was first noticed twelve months before the patient's

admission to the hospital, and since these were detected many others had appeared. One little nodule near the right knee became very prominent and discharged spontaneously six weeks before admission. In regard to the patient's past history, she is said to have been

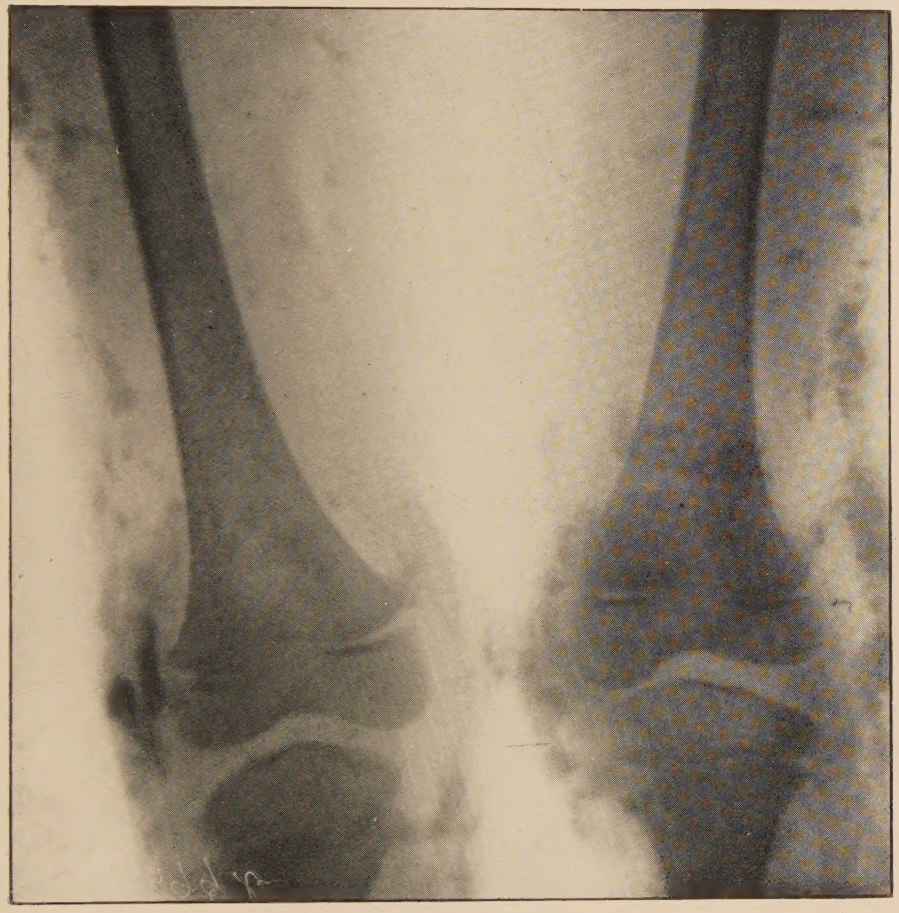

Fig. 2.—Skiagram of lower limbs to show the numerous subcutaneous calcareous concretions, especially about the knees.

subject to skin eruptions, but the chief point is that in November, 1909, she was under treatment at a fever hospital for scarlet fever, and that from that time to August, 1910, she suffered successively from diphtheria, paresis of the lower extremities (diphtheritic paralysis ?), a skin eruption somewhat resembling lichen ruber, pneumonia, an abscess in the right axilla and an abscess at the back

of the neck, a corneal ulcer (marantic ?) of the left eye, and left-sided otorrhœa. The corneal ulcer perforated (giving rise to considerable prolapse of the iris), but ultimately healed up again. During the latter period of this succession of illnesses the patient was

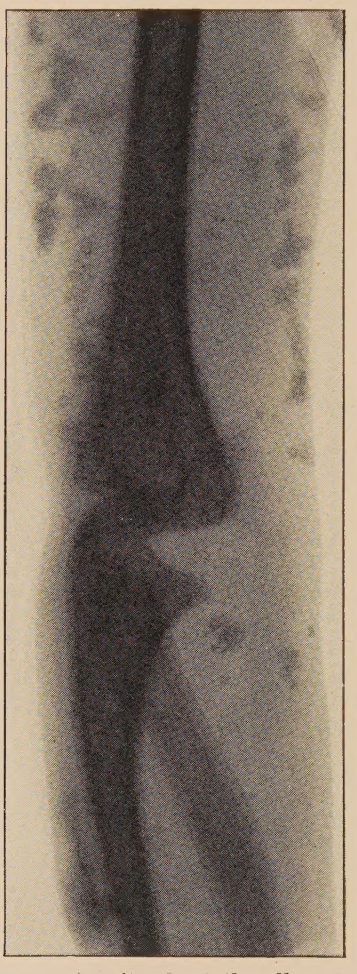

FIG. 3.—Skiagram of upper extremity about the elbow to show subcutaneous calcareous concretions.

in the German Hospital. She left the hospital on August the 1st, 1910, but was readmitted in September of the same year for temporary fever of uncertain origin. Since that time the child's condition seems to have remained satisfactory until the appearance of the subcutaneous nodules first attracted the parents' attention about August,

1911. In regard to the family history there is little to be said. The father, a traveller, is a healthy-looking man, who has never suffered from any venereal disease. The mother, aged 35 years, subject to epilepsy, has had no miscarriages or abortions. Of the patient's four brothers and one sister, one brother had rheumatic fever and another had tuberculous disease of the left ankle-joint (the others said to be healthy).

That the subcutaneous nodules in the present case consist largely of calcareous material has been proved both by Röntgen-ray examina-

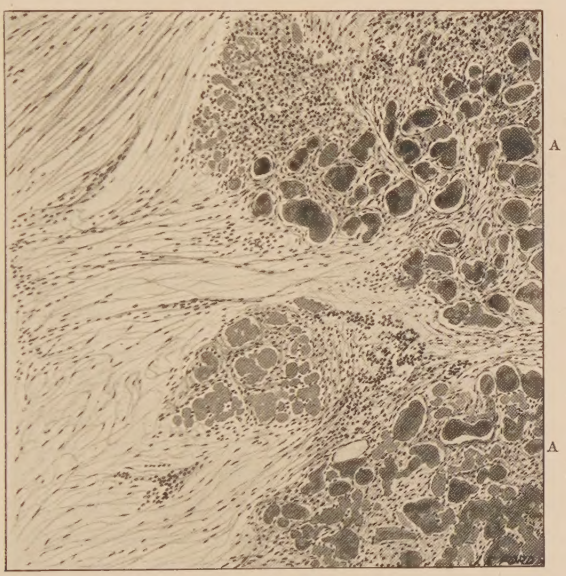

FIG. 4.—Part of the edge of an inflamed calcareous nodule from the right forearm. Drawn from a decalcified microscopical section, stained with hæmatoxylin; magnified 55 times. On the right of the picture are variously shaped islands (A) of structureless material, apparently the necrotic *débris* marking the site of minute concretions, the lime salts having been extracted by the weak hydrochloric acid used for decalcification. These decalcified particles are contained in a meshwork of connective tissue and inflammatory small-cell infiltration. On the left of the picture is subcutaneous connective tissue.

tion and by chemical analysis. The skiagrams (Dr. G. Dorner) show how numerous these calcareous infiltrations are (there must be over a hundred of them in the patient's limbs, see Figs. 1 to 3), and suggest likewise that the larger nodules are formed by the coalescence of smaller foci. The nodules occasionally become inflamed and softened, the skin over them becomes adherent, and if they were left to themselves thin purulent matter mixed with calcareous *débris* would

doubtless be gradually extruded through a fistulous opening in the skin. Two such softened nodules have been excised and examined (Dr. G. Dorner). The gritty material was found to consist of calcium carbonate and calcium phosphate. (The addition of weak sulphuric acid under the microscope was followed by the separation of bubbles of carbonic acid gas and by the formation of acicular crystals of calcium sulphate; the ammonium molybdate test showed the presence of phosphates.) No tubercle bacilli or other microbes could be detected in the contents of the nodules. Culture tubes of glycerine-agar, glucose-agar and egg-agar were inoculated, but remained sterile. Another concretion was examined for uric acid by the murexide test, but with negative result. Microscopical sections of a softening nodule (see Fig. 4) show that the nodules consist of a sponge-like matrix of subcutaneous connective tissue, in the interstices of which the granular particles of lime salts are embedded. Thus the accompanying illustration, from a microscopical section stained with hæmatoxylin, shows many structureless islands (necrotic *débris*), from which the lime salts have been removed (by the weak hydrochloric acid ordinarily used for decalcifying), embedded in a spongy framework of connective tissue, which is undergoing inflammatory small-cell infiltration (inflammatory softening) previous to the process of "breaking down" and discharging. The nodule, in fact, consists of granules of calcareous material held together by a fibrous framework, and there is nothing of the complete (stone-like) calcification met with in calcified tuberculous (caseous) foci and in calcified gummata. The diffuseness of the process of calcification explains why, in this kind of calcification, the concretions cannot be "shelled out" when an attempt is made to remove them.

Further skiagrams (kindly taken by Dr. Finzi) of the abdomen, thorax and axillæ give no evidence of calcification in the axillary, intra-thoracic, or intra-abdominal lymphatic glands, or in any of the thoracic or abdominal viscera.

In regard to the ætiology of the calcareous nodules, syphilis and tuberculosis may be practically excluded by reason of the various above-mentioned data. Moreover, both Wassermann's reaction for syphilis (tried at the Lister Institute) and von Pirquet's cuti-reaction for tuberculosis gave a negative result; the complete absence of fever is likewise an important point. The case is not at all like one of myositis ossificans, for the muscles (at all events as yet) seem not to be affected; there is no abnormal formation of true bone; and the inflammatory softening of the calcareous nodules is different to anything which occurs in myositis ossificans. Moreover, the child

has no shortness (microdactyly) of the great toes, such as has been recorded in several cases of myositis ossificans. The scattered literature of the subject shows, however, that the child's condition can be regarded as one of a definite disease, as distinct at least as myositis ossificans and many other "diseases."

"Calcinosis" is probably the most convenient term to be used for the disease in question, and more advanced cases have been described under the headings "Calcinosis interstitialis," and "Calcinosis universalis" (see 15). Apparently the chief danger is the risk of septic infection associated with the "breaking down" and discharge of the calcareous nodules. There is a condition, occurring in rather older subjects, which possibly represents a more chronic and less severe variety of the same disease (8, 12, 13, 16). In that condition the calcareous deposits occur chiefly in the subcutaneous cushions of the finger-tips and at the elbows, about the olecranon, and sometimes in the toes. Such cases have been recently demonstrated in England by Scholefield and Weber (11) and by Haldin Davis (3); and still more recently by W. K. Hunter at the Glasgow Medico-Chirurgical Society (October the 4th, 1912); the patients are all subject to Raynaud's phenomena and most of them gradually develop a sclerodermatous change, chiefly in the fingers ("sclerodactylia"). Sir William Osler has met with two such cases of sclerodermia associated with subcutaneous calcification.

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SUB-AORTIC STENOSIS.*

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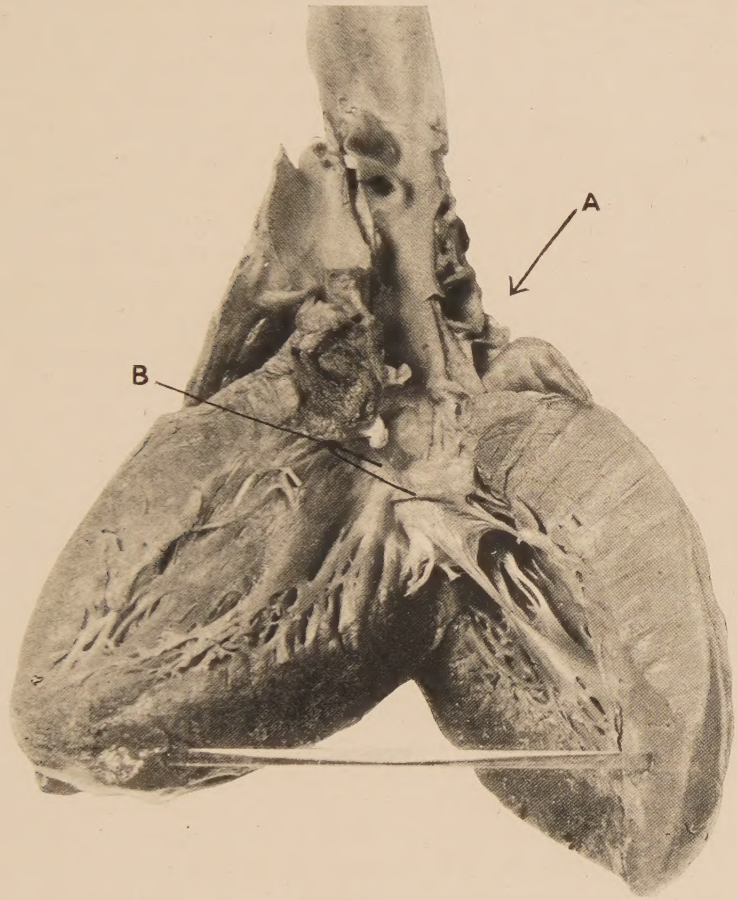
The specimen of sub-aortic stenosis described was taken from a boy, aged 14 years, who was brought dead to St. Bartholomew's Hospital in May, 1912.

He was seated at work when he suddenly fell from his seat; when picked up he was able to swallow some water, but though brought directly to the hospital—a short distance—he was dead on arrival.

* A paper read before the Section for the Study of Disease in Children of the Royal Society of Medicine on January the 24th, 1913.

On enquiry it was found that he had been an in-patient seven years previously, suffering from a mild attack of faucial diphtheria. Reference to the notes taken at that time showed that he then had a loud systolic murmur heard over the whole præcordia and the



A = Aortic semilunar valve.
B = Sub-aortic fibrous ring.

back; the point of maximum intensity was the aortic area in the second right intercostal space. No mention is made of a thrill nor of the character of the impulse. The diagnosis suggested was "patency of the septum ventriculorum." Apart from this illness he had enjoyed fair health, but was known to have a "weak heart," and from time to time had attended the casualty department for a cough.

He was the fourth of five living children, all of whom enjoyed good health; besides these children his mother had four miscarriages.

The body was that of a tall, muscular, well-developed boy; there was no clubbing of the fingers, and no external malformation or injury. On opening the thorax the heart was seen to occupy a larger area than normal, the greater part of this increase being due to hypertrophy of the left ventricle. The right side of the heart was moderately dilated; the auricle showed some thickening of its walls, and the ventricle was in comparison with the left small and thin-walled, and empty of blood; the tricuspid and pulmonary valves were normal. The left auricle on the other hand was greatly hypertrophied, the thickness of the wall being at least $\frac{1}{8}$ inch; the dilatation was slight. The mitral orifice and cusps, except for the band to be mentioned, were normal. The ventricle was enormously hypertrophied and considerably dilated. The aortic orifice was narrowed by a fibrous ring situated on the septum ventriculorum immediately below the undefended space and extending over the posterior aspect of the mitral aortic cusp. The diameter of this ring at its widest was less than a quarter of an inch; its edges were smooth and free from vegetations. The aortic semilunar cusps were thickened and the two coronary cusps fused into one, so that the orifice was much narrowed. Immediately above the non-coronary cusp was a thin line of fibrous thickening in the wall of the sinus of Valsalva; and at the level of the ductus arteriosus, which was closed, was a transverse line of thickening, which appeared to have produced a slight narrowing of the lumen of the aorta. Otherwise the intima of the aorta was normal, and no abnormality was noticed in any other vessel. The heart weighed 14½ oz.; the pericardial membrane was normal.

Examples of sub-aortic stenosis have been seldom recorded. Dr. Norman Moore, in 1882, described a specimen, which is still in the museum of St. Bartholomew's Hospital. It was obtained from a lad, aged 18 years, who was admitted to the wards in May, 1882, with dyspnœa and swelling of the feet and ankles, under the care of Sir William Church. The clinical notes state that he was markedly anæmic and generally œdematous. His pulse is described as "feeble and thready," 120 a minute. The heart's impulse was felt in the nipple line 1 in. below the nipple; the cardiac dulness extended to the middle of the sternum. A loud double murmur was audible over the whole cardiac region, in the axilla, and all over the back; its maximum intensity was at the apex and down the sternum.

No mention is made of a thrill, nor of the character of the impulse. The patient was four weeks in hospital, with an evening temperature usually of 101° F., albuminuria, hæmaturia, and casts. He was said to have been always weak and subject to fainting fits.

At the post-mortem examination the pericardium occupied almost the whole of the exposed area, "almost the size of a man's head." The heart was freely movable in the fluid which distended the sac; this fluid was slightly turbid, but there were no flakes of lymph. "At the base of the heart was a hard mass, about 2½ in. by 2 in., exactly in the situation of the lower part of the thymus in a child." There was some, but no great hypertrophy of the heart. Just below the aortic valve was a thickened ring of fibrous tissue attached to the septum on one side, and to "the outer wall" (*sic*) of the heart above the mitral valve on the other. Above this ring the aortic cusps were competent and in no way abnormal.

The aorta was free from atheroma. At the origin of the innominate artery there was an opening, almost circular, one inch in diameter, the mouth of an aneurysmal cavity partly filled with organised clot—the mass referred to above. The liver and spleen were very large, and the kidneys weighed 28 oz., and were pale, swollen, with capsules which split easily.

Professor Keith, in the Hunterian Lectures of 1909, had seen only four hearts which showed this condition; one was the specimen just mentioned, one in the museum of St. George's Hospital, one in Guy's, and one which was lost in the fire at Toronto University.

Another example was recorded by Fletcher and Beattie from the Royal Infirmary, Edinburgh, in 1904; it was obtained from a girl, aged 17 years, who had enjoyed good health to the age of fifteen. This patient was dyspnœic but not œdematous; the pulse-rate was 120 a minute, the beat very feeble, and almost obliterated on raising the arm. The apex-beat was feeble somewhat far out and down. On auscultation a loud rough and prolonged diastolic murmur was heard all over the heart and at the root of the neck; this was most intense at the inner end of the third left intercostal space and down the sternum; at the apex there was a short systolic murmur. The right border of the heart was not beyond the right sternal border. At the autopsy there was a mass of dense fibrous tissue between the pericardium and the epicardium. The pulmonary artery was narrow at its orifice and the valve segments smaller than normal, but they showed no degenerative changes. The aortic valve-segments were much thickened and the left anterior cusp was ulcerated and perforated, the perforation surrounded by recent vegetations. Imme-

diately above the posterior cusp was a mass of vegetations on the wall of the aorta, and beneath these a small aneurysm. Five mm. below the aortic cusps was a thickened calcareous ring 6 mm. in diameter. The aorta was healthy. No mention is made of clubbing of the fingers or of a præcordial thrill.

Shennan, in 1897, described a specimen in a male, aged 19 years. This boy was poorly developed with marked clubbing of the fingers, but there was no œdema. There was marked episternal pulsation, a marked systolic thrill to the right of the middle line in the first and second intercostal spaces, and a blowing systolic murmur so loud in the aortic area as to be audible five inches from the chest-wall. The heart showed hypertrophy of the left ventricle, and the same sub-aortic fibrous ring as has been already described. There were recent vegetations on the ring, extending upwards to the aortic cusps.

This rare malformation has been explained by Prof. Keith as follows: "The part of the fœtal heart from which the infundibulum is derived—the bulbus cordis—normally disappears completely from the left side of the heart, but a trace of it may persist, giving rise to the condition known as sub-aortic stenosis; . . . thus while the abnormality on the right side of the heart depends on an arrest of growth, that on the left depends on an arrest of atrophy."

The specimen which we have recorded differs from the others in the fact that it presents further evidences of malformation in the fibrous thickenings present in the wall of the aorta. That situated at the level of the ductus arteriosus is especially important, since it represents the constriction which is normally present in the fœtus at this spot, the persistence of which leads to the abnormality known as coarctation of the aorta.

It is obvious from the descriptions given above that the condition is not incompatible with good general health, at any rate, when it is present only in a slight degree, and so long as there is no infection of the abnormal structure or of the valve; and we would suggest that it affords a probable explanation of no inconsiderable number of those cases of congenital heart disease, who, without cyanosis or clubbing of the fingers and with good general development, have a loud rough systolic murmur heard at its maximum down the sternum. Such cases are not very uncommon among London school-children, and are detected in the course of routine examination, not by reason of any failure of health.

The physical signs which we should expect to find in such a case are (i) evidence of an hypertrophy of the left ventricle; (ii) a loud

systolic murmur with its maximum intensity in the second and third intercostal spaces on the right side, and conducted down the sternum; and (iii) a systolic thrill, most marked in that area. It is, however, remarkable that the thrill is only recorded in one of the four cases noted.

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A CASE OF PATENT DUCTUS ARTERIOSUS, WITH SKIAGRAM.

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The skiagram reproduced here is taken from the following case, an out-patient at St. Mary's Hospital.

Girl, aged 11 years. The mother states that the child's heart was recognised as abnormal at birth. The child has suffered from occasional brief attacks of pain round the heart, and is said to be rather short of breath on exertion. There is no history of any cyanosis at any time.

The child is intelligent and looks normal except for being rather short for her age (4 ft.). There is no cyanosis even on exertion. The fingers show no clubbing.

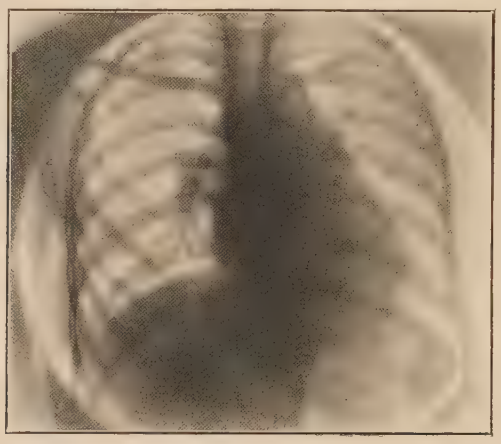
Heart.—The heart is dilated one inch to left and right. The upper limit of the heart is abnormal, dulness being easily detected in the first and second interspaces, next to the left margin of the sternum, of a width of about one and two inches in these spaces respectively (Gerhardt's "band of dulness.") On inserting the finger into the episternal notch pulsation is easily detected. On palpation there is a double thrill over the pulmonary area, but no diastolic shock. On auscultation there is a very loud "mill-wheel" murmur

audible over most of the chest, front and back, with its area of maximum intensity in the second and third left intercostal spaces, near the sternum. The pulmonary second sound is audible,

The blood-pressure in the radial arteries is unequal—104 mm. in the right and 110 mm. in the left.

Skiagram.—The heart's shadow shows some enlargement to right and left. The continuation upwards of the shadow is very distinct, the line of the left border being continued obliquely upward to the eft sterno-clavicular articulation.

In our case the physical signs in the chest are just those usually attributed to a patent ductus arteriosus. There is no definite



evidence, either by signs or symptoms, of any associated malformation. Patency of the ductus existing alone is one of the rarer lesions in congenital heart disease, but it is well recognised that in such a case the symptoms are usually very few and slight, although the physical signs, at all events in later childhood, are very marked.

The band of dulness close to the left border of the sternum above the level of the third rib was described in cases of patent ductus by Gerhardt many years ago, and was confirmed by François-Franck. Since the arrival of radiography this abnormal condition has been fully verified by observations on the peculiar shape of the heart's shadow in such cases. One of the earliest references to such a skiagram dates back to 1898, when Zinn referred to a case in which the abnormal shadow could be detected by Röntgen rays but not with sufficient clearness for reproduction in his article. Schrötter alludes to the radiographic shadow in 1901, and apparently a print

of it is included in his atlas of radiography, published about this time, to which we have not been able to gain access. More recently good reproductions of the characteristic shadow have been published by Arnheim, Hochsinger, Carpenter and others.

Hochsinger raises an interesting point in the diagnosis of such cases as show the abnormal shadow corresponding to Gerhardt's band of dulness. He states that such a shadow would be shown, not only in cases of patent ductus, but also in cases where there is an aneurysmal dilatation of the pulmonary artery with a closed ductus. This second type of case he says has not been diagnosed during life, but has been described by Dresler, Arnheim, Krzyszkowski and Wiczkowski, Weinberger and Burke. Hochsinger reproduces in his article a skiagram which exactly resembles the one shown here, but which he regards as due to an aneurysmal pulmonary artery with a closed ductus. He bases this diagnosis upon the fact that no pulsation could be detected in the neck (episternal notch).

If this point of differentiation be accepted it is interesting to note that in our own case episternal pulsation is readily appreciated, so that a diagnosis of patent ductus is justified in spite of the exact similarity in Hochsinger's skiagram to our own. In our case, too, there is a difference in the pulse tensions at the two wrists—a point in the diagnosis of patent ductus on which some have laid considerable emphasis, although discounted as inconstant by other observers.

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RETROSPECT OF OTOLOGY, 1912.

By Macleod Yearsley, F.R.C.S.,

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The prevailing note in the literature of otology for the year 1912 seems to have been one of prevention, and this is, no doubt, largely due to the increased activity of school medical inspection. This is undoubtedly a step forward.

In *anatomy and physiology* two papers are to be noted; the study of the structure and development of the mastoid and its influence on the evolution of otitis media by Mouret (B.M.S.F., p. 364) and the mechanism of auditory ossicular chain by Hugo Frey (J.L., p. 687).

Among the work done from the aspect of *clinical examination* must be mentioned that of Constantin on the technique of auditory examination in infancy (J.L., p. 353), the direct examination of the nasopharynx and Eustachian tube by Macleod Yearsley (J.L., p. 269), and the discussion on the value and significance of hearing tests at the Royal Society of Medicine (J.L., p. 368), in which Barr, Scott, Milligan, Dundas Grant, Macleod Yearsley, Jenkins, Westmacott and Hugh Jones took part. Another discussion, of even greater importance, although, perhaps, indirectly, was that between the combined Sections of Otology and Laryngology at the British Medical Association's meeting in Liverpool, on the education of the specialist in laryngology and otology. This was very representative, the speakers being—Watson Williams, Birkett, Mygind, Westmacott, Horne, Woods, Permewan, Thomson, Jackson, McKenzie, Downie, Hunt, Waggett, Macleod Yearsley and Hugh Jones (J.L., p. 541). Other items to be noted are: McKernon (Y.M.J., xviii, p. 25) on aids to diagnosis in otology and their clinical significance, and Milligan (J.L., p. 477) on radiography in the determination of mastoid disease. Two other papers which are noteworthy are "The Nasopharynx and its Relations to Other Regions" by Macleod Yearsley (C.J., xxxix, p. 377) and "The After-treatment of Nose, Throat and Ear Operations" by Goldsmith (J.L., p. 646).

As usual, *middle-ear suppuration and its complications* claims a bulky literature, much of which may be discarded. The most important contributions are as follows. Acute suppurative otitis media was discussed at the British Medical Association's Liverpool

meeting (J.L., p. 549) by Woods, Rundle, Alexander, Mygind, Ballenger, Milligan, Kerr Love and Watson-Williams. Braun (M.R., ii, p. 697) wrote on the significance and management of chronic discharging ears, and Macleod Yearsley (S.H., p. 69) on the treatment of suppurating ears in school-children. The vaccine therapy in diseases of the ear, nose and throat has received attention from Dabney (N.Y.M.J., i, p. 273).

The mastoid operation was discussed as regards its indications by Hastings (P., ii, p. 597), and Oppenheimer (M.R., ii, p. 975) considered the pro and con of maintenance of the retro-auricular opening after the radical procedure. Ballance (L., ii, p. 428) has returned to the scene with a paper on epithelial grafting as a means of effecting the sure and rapid healing of the cavity left by the complete operation.

An excellent paper is that of Citelli (J.L., p. 635) on true serous lepto-meningitis cured by operation, with considerations on this interesting otitic complication, and Logan Turner (J.L., p. 297) has made valuable contributions to the serum and vaccine therapy in the treatment of the intra-cranial complications of middle-ear suppuration. Cases of cerebellar and cerebral abscesses of otitic origin in children have been published by Savariaud and de Lamothe (J.M.P., xxxii, p. 171). Another interesting case was recorded by Nicoll and Fielder (A.P., xxix, p. 585), in which mastoiditis was followed by general sepsis, with symptoms of tetanus.

The predominant note of prophylaxis mentioned above is illustrated by three papers, one by Kerr Love (J.L., p. 554) on the prevention of deafness in *non-suppurative deafness*, one on the prevention of deafness in children by Macleod Yearsley (B.J.C.D., ix, p. 396), and the third by Macleod Yearsley (P., i, p. 653) on the meaning of adenoids to children.

Some of the papers already mentioned have been in connection with *school hygiene*, as also are the following, dealing more especially with *deaf-mutism*—the pathology of deaf-mutism, by Makuen (N.Y.M.J., i, p. 1189), the oral method of educating the deaf, by Kerr Love (J.L., p. 384), and the causes leading to educational deafness in children, with special reference to prevention, by Macleod Yearsley (L., ii, pp. 138 and 228).

References.

A P.—'Archives of Pediatrics.'
B.J.C.D.—'British Journal of Children's Diseases.'
B.M.S.F.—'Bulletins et Mémoires de la Société française d'Oto-rhino-laryngologie.'
C.J.—'Clinical Journal.'

J.L.—'Journal of Laryngology, Rhinology, and Otology.'
J.M.P.—'Journal de Médecine de Paris.'
L.—'Lancet.'
N.Y.M.J.—'New York Medical Journal.'
M.R.—'Medical Record.'
P.—'Practitioner.'
S.H.—'School Hygiene.'
Y.M.J.—'Yale Medical Journal.'

Royal Society of Medicine.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Friday, January the 24th, 1912.

Mr. A. H. Tubby, *President, in the Chair.*

Case of (?) Fibro-lipoma.—Miss A. L. J. Kann showed for Mr. Duncan C. L. Fitzwilliams a boy, aged 2 years and 8 months, who had been under the care of a foster-mother for two years. When the foster-mother first took care of him she noticed small lumps on the inner back part of the right arm. This gave rise to no trouble. There was no swelling on the chest at that time, but in December last she noticed a swelling on the right side of the chest; latterly this has become a little larger, and she therefore brought the child up for treatment.

The child never complained of pain in the lumps nor do they seem tender. On examination there are four small swellings, distinct from one another, on the back of the arm, and in the axilla they feel fibrous, some being larger than others. The axilla is filled with a mass about as large as an orange, which bulges forward the anterior axillary wall and appears in front under the pectoral muscles. It is firm, with well-defined edges, and slight lobulation. It is movable on the structures beneath and under the superficies. There is no impulse on coughing or crying.

The child is very backward and undersized, with marked signs of rickets. The fontanelle is still open.

Case of Lymphangioma resembling Hernia of the Lung.—Miss Kann also showed for Mr. Duncan C. L. Fitzwilliams a boy, aged 6 years. The mother has noticed that something was wrong with the right side of his neck when he cried. She states that she noticed this vaguely when she was washing the child, and she can recall it as far back as twelve months ago, but she took little notice of it until it began to get larger during the last three months. In November the child got whooping-cough, and this lasted until the end of December. During this time his mother noticed that the lump got very large in his neck during the spasms of coughing.

On examination, there is a fulness of the root of the neck above the right clavicle and behind the sterno-mastoid muscle. It is ill defined and quite soft, and small nodules can be felt in it. It seems to disappear under the

fingers towards the region of the subclavian artery. On coughing or straining the root of the neck fills up and bulges in a prominent manner, and on palpation the tumour again subsides. Percussion is satisfactory as there is so little resistance, and though breathing sounds are heard they are probably transmitted.

The condition at first sight is extremely like a hernia of the apex of the right lung, but there is no indrawing and deep inspiration, nor can any ring be felt in the deep part of the neck, and the diagnosis is that the condition is an extensive lymphangioma with large loculi, the large portion of the tumour being situated in the chest.

Two Similar but somewhat Unusual Heart Conditions in Sisters.—Dr. R. C. Jewesbury.—(1), aged 8 years. The mother was told by her doctor that this child's "heart was affected" when she was three weeks old. The child was not cyanosed at birth and has never been noticed to get blue. She has suffered from dyspnœa on exertion for the last three or four years and has complained of growing pains during the last two years. No history of acute rheumatism. She has had measles twice, but no other illness. Heart enlarged. Apex-beat in sixth space in nipple line; systolic murmur at apex conducted out, second sound accentuated. In the second and third left space a loud, rumbling murmur, partly presystolic and partly systolic, is heard, and a well-marked thrill is felt in this position. At the pulmonary area a systolic murmur is present, conducted upwards to the neck. Aortic sounds: First sound soft, otherwise normal.

(2), aged 10 years. No heart disease was ever suspected until she was brought to hospital a few days ago. She had always been a healthy child. No history of rheumatism; heart not enlarged. In second and third spaces a well-marked thrill (systolic), and over this area a prolonged, continuous, booming murmur is present, very similiar to that heard in her sister's case.

Three Cases of "Calvé's Pseudo-coxalgia."—Mr. R. C. Elmslie.—Case 1: Boy, aged 10 years. In November, 1909, he fell and twisted his right foot: attended an out-patient department for a week and recovered. About three weeks later he was kicked on the right hip, which was noticed by the mother to be much bruised; from that time he limped and had occasional pain in the knee, especially after lying down. He had no pain at night. On examination in March, 1910, the hip movements except full hyper-extension were free; the limb was $\frac{3}{8}$ in. shorter than the left, the shortening being above the great trochanter; there was little wasting of the thigh. A skiagram showed that the acetabulum was clear and smooth, but that the epiphysis of the head of the femur was a little flattened, its surface uneven, and its upper edge proportionately thicker than it should be; the neck of the femur appeared shorter and thicker than normal. He was kept in bed for three weeks and the condition did not alter. Subsequent skiagrams showed no important change, although the flattening of the epiphysis and the thickening of its upper border became rather more evident.

Case 2: Boy, aged 8 years. The parents in this case had not noticed anything wrong, but were informed after a school medical inspection that the boy limped. He was brought to the hospital in January, 1912. At that time there was little limitation of the abduction of the right hip-joint, most marked in the flexed position; other movements were free. The shortening was not more than $\frac{1}{4}$ in., and there was a little wasting in the thigh. A skiagram was taken, and the appearances were found practically identical

with those in the last case. The parents were then informed that no treatment would be necessary.

These two cases agree as to clinical signs and skiagraphic appearances with Calvé's description, but neither was observed in the acute stage described by him.

Case 3: Girl, aged 9 years. At the beginning of 1912 this child had an attack of chorea and rheumatism in the right leg, and in the summer she was in hospital for chorea. Whilst convalescent from diphtheria in August she was noticed for the first time to limp, but she had at this time no pain or disability. She was brought to hospital again in December. No injury to the hip could be remembered. The right hip is kept flexed, further flexion is free, extension is limited, abduction abolished, and rotation in both directions limited. The limb is $\frac{3}{8}$ in. shorter than the left, this shortening being above the great trochanter. A skiagram shows the head of the femur to be deformed in much the same way as in the previous cases, but in addition the upper part of the acetabulum is eroded, and the head of the femur displaced a little upward; the femoral neck is short and thick.

This case differs from the first two and from those described by Calvé in the changes in the acetabulum and in the partial upward dislocation.

Case of Congenital Syphilis with Enlargement of the Liver and Spleen.—Dr. J. Walter Carr.—Girl, aged 12 years. No definite family history of syphilis can be obtained, but the patient is the third child, and her mother had two miscarriages between the births of the second and third children. The girl was born at full term, and there is no evidence that she had any symptoms suggestive of syphilis during infancy. She was in the hospital, March, 1911, for syphilitic disease of the soft palate, with pain and difficulty in swallowing. At present the uvula is destroyed and the remains of the soft palate are adherent to the posterior wall of the pharynx; there is a perforation on the left side of the palate communicating with the left nostril. The liver is much enlarged, reaching nearly to the umbilicus; it is hard, smooth, and not tender. The spleen is also enlarged and hard, extending about 3 in. below the costal margin. There is no albumin in the urine. There is a slight thickening of the middle third of the right tibia. The eyes are healthy. Blood examination: Total red cells, 3,750,000; total white cells, 6500; polymorphonuclear neutrophiles, 61·8 per cent.; polymorphonuclear eosinophiles, none; mononuclears—large 18·7 per cent., small 19·4 per cent. Two nucleated reds were seen in counting 350 white cells. Hæmoglobin, 100 per cent. Wassermann reaction strongly positive. Lately the child has got thinner and has complained of loss of appetite and diarrhœa.

Case of Hirschsprung's Disease.—Dr. J. Walter Carr.—Boy, aged 9 years. Was treated about six years ago for severe constipation. Since then he has always been more or less constipated, requiring a great deal of purgative medicine. He was admitted to hospital on January the 10th, and for six weeks previously his bowels had only been opened by injections. A number of scybalous masses were felt in the hypogastric region; these have been removed by enemata, but there has been no spontaneous action of the bowels. The boy looks fairly healthy. The abdomen and the lower part of the chest are greatly enlarged, and the increased length between the ensiform cartilage and the umbilicus is very marked. The whole abdomen is very tympanitic, and there is marked visible peristalsis. The liver, spleen and

heart are all much displaced upwards, the heart's apex-beat being in the third left space. The rectum appears to be normal.

Arterio-sclerosis with absence of both Radial Pulses in a Girl, aged 15 years.—Dr. Charles W. Chapman.—The patient was admitted to hospital on November the 20th complaining of cough and orthopnœa on exertion or exposure to cold. There was rheumatism on the mother's side.

History.—No special illness until four years ago, when she suffered from loss of power in the legs with loss of speech, the attack lasting fifteen minutes. There were several similar attacks during the following six months. Bronchitis two years ago. She is said to have had chalky lumps on her abdomen last summer. When first seen the area of cardiac dulness was increased in both directions, that on the left side being 9 cm. beyond the mid-sternal line; the apex-beat was in the sixth space at the extreme margin of the dulness. The finger-tips were slightly congested. Catamenia not commenced. Teeth very bad.

On admission the cardiac dulness was as stated; the subclavians were visibly pulsating, and aortic pulsation could be felt by the finger in the aortic notch, the brachial and radial arteries were hard and devoid of pulsation, the iliac arteries were visibly pulsating, but only feeble pulsation could be felt at the left post-tibial and not at all on the right; the apex beat was in the sixth space and the action cantering. Urine: Specific gravity 1022, albumin a trace, sugar absent, no casts or red blood-cells. Wassermann negative.

Since admission the child has gained weight and has generally improved; the cardiac dulness is diminished and she can lie down in comfort. There is still a cloud of albumin. The skin on the abdomen is dusky, but no cyanosis or blanching is present.

Case of Interstitial Keratitis and Osteo-periostitis of the Tibiæ treated with Neo-salvarsan.—Mr. Sydney Stephenson.—Boy, aged 6 years.

Family history.—Has three sisters, aged respectively 9, 8 and 2 years, all apparently healthy. The mother gives no history of infection. Ten years ago she was affected with some nasal trouble, for which she was treated as an out-patient at the Hospital for Diseases of the Throat, Golden Square. One child, born prematurely at the seventh month, died when aged 7 weeks from some cause unknown to the mother. No miscarriages or stillbirths. The father is at present under treatment for stricture of the urethra.

History of illness.—Nine or ten months ago the patient is said to have suffered from "rheumatic pains" in backs of hands, shoulders, both knees and both legs. Although medically treated he did not improve much. Just before last Christmas the father noticed a film over the child's right eye, and then found that he could only tell day from night with the affected eye.

State upon admission on January the 9th, 1913.—No signs of syphilis in face, cranium, or teeth. The inguinal and cervical glands are slightly enlarged and "shotty" to the touch. The skin is in a state of xeroderma. Nodes are present on the middle third of each tibia, being more marked on the right side. The overlying skin is not discoloured, and the swellings themselves are not tender. There appears to be the remains of a similar node about the middle of the right ulna. Chest and heart normal. The Wassermann reaction was positive.

Right eye.—Trifling ciliary redness and photophobia. The pupillary area

of the cornea shows a disk-like interstitial opacity, while the peripheral parts of the cornea are almost clear. The anterior epithelium covering the opacity looks as if it had been breathed upon. The pupil, although the eye is being treated with atropine (2 gr. to the ounce, three times a day), is no larger than 4 mm. It is probably fastened down by posterior synechiæ. Tension normal. Vision, perception of light.

January the 20th, 1913: Neo-salvarsan, 0·6 gr., injected intra-venously.

The following pathological specimens were shown.

Congenital Renal and Ureteral Anomaly.—Dr. J. D. Rolleston.—Boy, aged 12 years. Death from generalised paralysis, following very severe faucial and nasal diphtheria, on forty-seventh day of disease. Violent attacks of abdominal pain during last twenty-four hours of life. Albumin present in the urine from the third to thirty-eighth day. Amount of urine passed during first eighteen days of disease ranged from 21 oz. to 37 oz. in the twenty-four hours. The specimens showed (1) single or asymmetrical left kidney, $4\frac{3}{4}$ in. long, 2 in broad, $1\frac{1}{2}$ in. thick, 6 oz. in weight; (2) partial duplication of ureter, the upper branch, 4 in. long, supplying the upper third, and the lower branch, $3\frac{1}{2}$ in. long, supplying the lower two thirds of the kidney; (3) union of the two branches of the left ureter, 3 in. from the bladder; (4) the right and left ureteral orifices in the bladder; and (5) a right ureter which is patent from the bladder to its blind upper extremity. The right kidney, renal artery and vein and right suprarenal were absent. No abnormalities of genital, circulatory, or other systems.

Specimen of Non-development of Cerebrum.—Dr. G. A. Sutherland and Mr. H. W. Perkins.—The specimen was from a child, aged 9 weeks, who had been shown at the November meeting (*vide* British Journal of Children's Diseases, 1913, x, *p.* 24). The head resembled that of a normally developed infant of this age, the circumference being $13\frac{1}{8}$ in. The anterior fontanelle was widely open, measuring 2 in. in the sagittal direction and 1 in. in the coronal. The sutures were not united. On opening the skull a quantity of blood-stained fluid escaped, amounting to 9 oz. On centrifuging this the blood-cells were thrown down, leaving a clear supernatant fluid of a straw colour.

The dura mater appeared to be normal, and the falx cerebri was fully developed and present throughout its whole length. The hæmorrhagic fluid present was apparently on the cavity of the arachnoid. This cavity was partially divided in the occipital region by a few fine, cobweb-like adhesions, present chiefly on the left side. The brain, lying on the base of the skull, was very small and covered with thickened, œdematous-looking pia arachnoid, which concealed its outline. On the removal of this membrane it was seen that the brain was extremely ill-developed as regards the cerebral lobes. The brain weighed 80 grm. Each cerebral hemisphere measured 9 cm. in length, 6 cm. in width, and 3·7 cm. in depth, taking the maximum measurements. The two halves of the dwarfed cerebrum on each side of the falx cerebri were roughly symmetrical, except that posteriorly into the occipital lobe on the left side a large hæmorrhage had taken place, the clot being recent and unorganised.

The middle third of the cerebral cortex on each side presented numerous convolutions, which, although small and narrow, were separated by well-defined sulci. The anterior parts of the cortex were extremely thinned, and

so intimately associated with the pia arachnoid that it was difficult to recognise any well-marked convolutions or sulci. The appearance here was that of numerous small cavities, like a honeycomb, bounded externally by the thinned cortex and pia arachnoid. Definite convolutions and sulci were present at the posterior pole on the right side, while on the left side the posterior pole was the seat of the extensive hæmorrhage referred to above. This hæmorrhage formed a roughly spherical clot about 25 mm. in diameter, limited externally by the thinned-out cortex and pia mater, and suggesting from its appearance the possibility of its having arisen from bleeding into a thin-walled cyst. The basal surface of the cerebral lobes presented a crinkled appearance, well-defined convolutions and sulci being absent. The cerebellum, medulla, pons and peduncles presented a normal appearance. All the cranial nerves could be identified, and the blood-supply and blood-vessels were normal so far as could be determined.

A transverse section through the right cerebral lobe at the level of the corpus callosum showed that the lateral ventricle was slightly distended, and that the ependyma and choroid plexus were normal. The brain substance beneath the ependyma had a spongy, reticulated appearance, and in the floor of the ventricle, beneath the lining membrane, was a small cavity about the size of a pea, filled with blood-clot. The left ventricle was but slightly enlarged. The foramen of Monro was patent and normal. The third and fourth ventricles were not enlarged, and the patency of the "iter" was established. The cortex of the mesial aspect of the cerebrum, when cut into, showed numerous small spaces about the size of a hemp-seed.

The following papers were read:

Sub-aortic Stenosis.—Dr. H. Thursfield and Mr. H. W. Scott (*ride* p. 104).

A Note on Mongolism.—Dr. F. G. Crookshank.—There can be no doubt that mongolism is really a form of infantilism, of special nature, and that tends to modification at puberty. But its significance is, apparently, phylogenetic rather than ontogenetic. There are, it is well known, to be traced in mongoloid idiots certain physical characteristics that are not easily recognised in racial Mongols. But many, if indeed not all of these, are homologous with those anthropoid apes, or rather, of orangs. Indeed, it may be said that the peculiarities of mongoloid idiots are, speaking generally, homologous with those peculiarities which, amongst the anthropoid apes, are either best marked in the orangs, or distinguish the orangs from the gorilla and the chimpanzee. That the orangs are the Mongols amongst apes has long been recognised, and the anthropogeny of Haeckel, as well as the more recent system of Klaatsch, is familiar to all.

I would draw attention, not only to the characters of the skull, the facial bones and the skeleton generally, but to such secondary characters as are displayed by the hair, skin, mucous membranes, lips, tongue, ear, eyes and teeth, to certain visceral peculiarities, and to the characters of the cerebrum, cerebellum, pons and medulla, which apparently account for certain mental characteristics, as well as for the nature of some functional manifestations. These points and others have been discussed in a paper published in the 'Universal Medical Record' for January, 1913, but I have thought the subject of sufficient interest to justify me in bringing it before the notice of this section. The considerable amount of information that has been sent to me from different sources since the publication of this paper,

while rendering necessary one or two modifications of statement, has greatly strengthened my belief in the accuracy of the contentions therein put forward.

I would like to allude to some remarks made several years ago by Dr. R. Langdon Down, reported in the 'Journal of Mental Science' for January, 1906, wherein the possibility of Mongolism being a reversion to a type "further back than the mongol stock" is hinted at. In a Paris thesis published in 1908, Mlle. Lutrovnik, while hinting at the simian morphology of mongoloids, evidently only just missed the real point by reason of the fact that she instituted comparisons with the chimpanzee and gorilla, and not with the orangs.

Dr. Douglas Hunter, of the Clifton Asylum, Yorkshire, some years ago was struck by the evident resemblances between mongoloids and orangs, and commenced a study of the matter. He did not pursue his researches, but, since the publication of my paper, has generously sent me his material, in which I am glad to find abundant confirmation of my own observations.

CLINICAL SECTION.

Friday, January the 10th, 1913.

Diphtheritic Hemiplegia.—Dr. J. D. Rolleston.—Boy, aged 5 years, was admitted to hospital on September the 3rd, 1912, with very severe faucial and nasal diphtheria on the fourth day of disease. Twenty thousand units of antitoxin given on admission, and another two doses of 24,000 units on each of the following days. Cardiac dilatation and irregularity occurred on the sixth day and was accompanied by vomiting, which persisted till the fifteenth day, and by enlargement of the liver. Knee- and ankle-jerks lost on twenty-first day. Sudden onset of right hemiplegia and aphasia on twenty-first day. Palatal palsy, shown by regurgitation of fluid through the nose, occurred on twenty-ninth day, ciliary palsy on thirty-third day, and pharyngeal palsy, necessitating rectal and nasal feeding, from thirty-sixth to fifty-eighth day. Other palsies noted were paresis of rectal and vesical sphincters, and of the diaphragm during the occurrence of pharyngeal palsy. Albuminuria from ninth to forty-first day; no serum phenomena beyond slight urticarial rash of one day's duration on nineteenth day.

Condition on discharge from hospital on December the 23rd, ninety-four days after onset of hemiplegia: Some spasticity of right arm and leg, and slight right facial palsy, extensor plantar response, ankle clonus and combined movement of trunk and pelvis on right side. Intelligence intact, but speech limited to a few syllables. Could walk with very little support. On January the 10th he could walk alone with a slight limp, otherwise his condition remained unchanged.

Case of Polio-encephalo-myelitis associated with Optic Neuritis, Nephritis, and Myocarditis.—Dr. Arthur Hertz and Dr. W. Johnson. A boy, aged 12½ years, was admitted to hospital on March the 5th, 1912, for paralysis of the left side, which had developed suddenly the same day.

On admission his pulse was 54, and temperature 97° F. He was semi-conscious; he could not move his left arm or leg at all, and there was some weakness on the left side of the face. His right pupil was smaller than the left. Both knee-jerks were present, the left being exaggerated; an extensor plantar reflex, diminished abdominal reflex, and ankle-clonus were present

on the left side only. There was some twitching of the right side of the face. Incontinence of urine and fæces was present. The heart was greatly dilated and a loud systolic murmur was heard at the apex, but there was no history of rheumatism, scarlet fever, or previous cardiac disease. The case was diagnosed as cerebral embolism.

The patient became fully conscious the next day. A tremor now occasionally affected the right arm and leg. There had never been any rigidity of the arm and only slight rigidity of the leg, but in the course of three days both became completely flaccid and the tendon reflexes disappeared, but the extensor plantar reflex remained. The knee-jerk and ankle-jerk disappeared from the right side also, but there was only a very slight degree of weakness in the right leg. The temperature was now taken in the rectum and found to be 101·2° F. The pulse was still very slow, but the cardiac condition was otherwise unaltered. On March the 8th complete paralysis of the left external rectus muscle developed. Lumbar puncture showed that the cerebro-spinal fluid was under increased pressure; it contained numerous lymphocytes and polymorphonuclear cells in approximately equal numbers. Definite optic neuritis was present, which was more marked on the left side than on the right.

On March the 16th some atrophy of the left side of the tongue was noticed. On March the 20th marked hæmaturia developed, and the urine contained many pus-cells and granular casts in addition to blood. The urine became normal again in about ten days.

The patient gradually regained some power in the left leg and to a less extent in the left arm. Slight wasting of the affected muscles took place, but there was no loss of electrical excitability. In the course of the next four months the knee-jerks reappeared on both sides; the knee-jerk and arm-jerks became exaggerated on the left side, on which well-marked patellar and ankle clonus also developed. The plantar reflex remained extensor on the left side. The temperature gradually fell to normal in the course of three weeks. The systolic murmur became less distinct and the heart less dilated. The paralysis of the left external rectus did not disappear until October.

At the present time the patient has recovered to a very considerable extent. There is still some evidence of optic neuritis, and the left arm is very weak; the left leg is comparatively slightly affected. The jerks on the left side are still exaggerated, and the plantar reflex extensor. The urine is now normal, and the heart is normal except for an occasional faint systolic apical murmur.

The subsequent history showed that the original diagnosis of embolism was incorrect; acute polio-encephalo-myelitis seems a more probable diagnosis. The same toxins which affected the nervous system probably caused the myocarditis and nephritis.

NEUROLOGICAL SECTION.

Thursday, January the 16th, 1913.

Disseminated Sclerosis in a Boy.—Dr. James Collier.—Boy, aged 13 years. Family history and past history *nil*. Increasing difficulty in walking one year; staggers about but never falls. Thick, stuttering speech

six months. Unsteadiness of hands three months. No sphincter symptoms; sight good; no pain.

Present condition: well-nourished, under-sized boy. Viscera normal. Intelligent, laughs easily; speech jerky, slow, and at times barely intelligible. Jerking movements of head. Vision and discs normal. Pupils normal. Movements of globes good, accompanied by nystagmus, or by extreme oscillation of head. No oscillation of objects. Intention tremor head and arms (left more than right) very well marked. Spine and trunk normal. Some increase of tone in legs; power good; jerky movement of legs during voluntary movement. Incurvation of little fingers. Sensation normal. Sphincters normal. Gait ataxic, broad base (much improved lately). Reflexes: All jerks brisk, no abdominal reflexes; double extensor response.

Paralysis of Right Lower and Middle Trapezius.—Dr. George Johnston.—A girl, aged 9 years, in August, 1911, suffered severe pain in the right upper arm below the point of the shoulder. This was followed after a few days by progressive weakness of the right shoulder and sticking out of the shoulder-blade.

Present condition: When standing at rest, with the arm dangling, the lower angle of the scapula is slightly higher than on the left side, the vertebral border being at the same distance from the spine as the left scapula, but the point of the right shoulder is much dropped, the clavicle sloping down to the right, while the vertebral column is curved with convexity to the left. When she rests her hand on her hip, or if she holds the arm out towards the right front, the scapula immediately becomes much winged, with the lower angle cocked upwards and inwards, and instantly strong contraction of the supra- and infra-spinatus is set up, causing swelling and hardening of these muscles. The upper portion of the trapezius is normal, as are also the rhomboids, serratus, levator anguli scapulæ, deltoid, and all the other muscles. No analgesia or other loss of sensation to be made out.

Electrical reactions show well-marked RD of the lower and middle trapezius on the right side.

The lesion suggested is a neuritis of the cervical supply of the trapezius, though usually a lesion of the spinal accessory causes atrophy of the whole trapezius, lower as well as upper.

Philadelphia Pediatric Society.

December the 10th, 1912, Theodore Le Boutillier, M.D., President.

Dental Conditions in Children.—Dr. George C. Küsel, by invitation, read a paper on "Feeding in Relation to the Teeth." Two important factors affect the state of preservation and the freedom from decay—simplicity of food and mastication. Alveolar pyorrhœa is due to lack of exercise of the teeth. The pregnant woman needs more nourishment even than a strong man; this especially is needed for keeping her teeth in good condition. The gastric secretion is more free and stronger with food which is liked. Small quantities of food call forth stronger juices than large quantities. A con-

siderable part of the food ingested is required to carry on mastication, digestion and metabolism, leaving a relatively small proportion ultimately available for tissue building. Protein food is a necessity. Animals cannot survive upon a nitrogen-free diet. The fats and carbohydrates protect the protein from oxidation. Calcium salts are especially needed by the organism. It is wrong to end a meal with carbohydrates; meat or vegetables are far better. An excess of sour fruits has a decalcifying action upon the teeth.

Dr. Frederick R. Stathers, by invitation, spoke upon "Orthodontia," which he defined as treatment of irregularities of the teeth affecting the adjacent parts. It is closely connected with medicine, the object of both being the restoration and maintenance of normal function. A definite relation exists between the teeth, their size, shape and position in the arch with the rest of the bones of the head in members of the same species. The shape, size and position are the best adapted to the food-habit and environment of the species. He showed the evolution of the alveolar socket and of the complex tooth form of mammalia to be due entirely to food habits and the environment of the species. He reviewed the macroscopic arrangement of the bone in the maxilla and mandible, and the architectural arrangement of the bones of the face. To show the development of human teeth, he showed slides from photographs of human skulls, the cortical plates of which had been removed, showing the teeth in their crypts. These slides showed skulls from birth to adult up, and proved that growth had been interstitial, due to the force exerted by the developing teeth. The forces exerted by the tongue, the muscles of mastication, deglutition, and respiration, and the action of the inclined plane of the teeth in mastication, all bear a very important part in moulding the jaws and dental arches. The object of orthodontia is to assist nature in establishing a normal balance of these forces.

Dr. Merrill S. Weeks, by invitation, spoke of the need of the medical profession supporting orthodontia. Ninety-five per cent. of all cases coming to him are associated with mouth-breathing. These children have a narrow dental arch, with the anterior teeth protruding, preventing the lips from closing. The palatal arch is narrow and high in its vertical position, thus restricting the area of the nasal tract. Septum deviation is common. There is lack of development or abnormal development in these cases, or both. Probably the abnormal development begins in the nose and throat, and the deviations in the dental field result. Uncivilised races have a far better developed dental arch and less misplaced teeth than civilised races; the former masticate their foods. Children must be taught to masticate well early. All treatment of these conditions, to be successful, should be attempted early in the child's life.

Dr. Piercy B. McCullough, by invitation, discussed the prevention of the diseases of children's teeth, specifically the consequences of dental caries. Glandular involvement is common, while septicæmia with death has been recorded as the result of a tooth infection. The first sign of impaired general health follows abscess, or a fistula discharging on the face at the angle of the lower jaw. Dental caries is controllable by dental operations only. Mechanical cleaning of the mouth is an important precaution, as, also, is the use of the tooth-brush. Mastication is the greatest cleansing agent, and filling is the only remedy to restore masticatory efficiency. Dental prophylaxis consists in preventing and curing abscess in temporary teeth, and in remedying structural imperfections in the permanent teeth.

Société de Pédiatrie, Paris.

November the 12th, 1912. (*Bulletin No.* 8.)

Nitrogenous and Saline Retention in Bottle-fed Babies.—M. H. Barbier read the notes of five cases bearing on the subject of azotæmia in infants brought forward by MM. Nobécourt and Maillet at the previous meeting. His contention was that babies brought up on the bottle took in, for the same volume of milk, a larger quantity of albumin and salts, that the stools of such infants also contained a larger quantity of proteids and salts, and that larger quantities of these substances were absorbed. Such infants looked obese, but were below normal weight and had a pallid, waxy look, their muscles were flabby and the face puffy. They were brought to hospital for digestive troubles accompanied by more or less marked nervous symptoms resembling meningitis. Change of diet cured the condition.

Hypertrophy of Thymus.—M. Victor Veau.—With regard to M. Weill's treatment of this condition by X rays, the speaker stated that he had had excellent results by the same method. For the last eighteen months he had given up thymectomy and treated all these cases with X rays with entire success.

New Treatment of Scoliosis, Abbott's Method.—MM. Calvé and Lamy showed several patients treated by this method, *i. e.* correction obtained by forcible flexion of the spinal column. The children were placed on a hammock with unequal sides. The convexity of the curvature was placed towards the short side of the hammock. The child's pelvis being fixed, the concave side was stretched and put up in plaster. Six weeks later when it was removed the spine seemed in a condition of hyper-correction. A celluloid apparatus was then used.

M. Ombrédanne thought the principle good, but the technique capable of improvement.

Amphoric Bubble.—MM. Variot and Rousselot showed specimens from the autopsy on the case they reported at the previous meeting. A kind of hour-glass pleurisy existed (*pleurésie en sablier*) with two distinct cavities separated one from the other, one subdiaphragmatic and one interlobar, joined by several fistulous tracks across softened pulmonary tissue.

Purpura, Pseudo-hæmophilia, and Repeated Epistaxis cured by X rays.—MM. Triboulet, Albert Weill and Paraf showed a girl, aged 7 years, who for three months had had attacks of severe hæmorrhage with purpura and abdominal crises. Red cells 2,800,000, white 15,700. Anti-diphtheritic serum, hæmostyl and splenic extract were injected without result. X-ray treatment over the region of the spleen and long bones gave immediately good results. Three applications were given.

Azotæmia and Athrepsia.—MM. Nobécourt and Maillet said that azotæmia, rare in older children even during nephritis, was common in the very young and particularly in athrepsia. Out of fifteen cases of this disease, examination of the cerebro-spinal fluid showed in seven instances

more than a gramme of urea per litre and eight times more than half a gramme. On the other hand, out of twenty-seven children in whom cachexia was due to other causes such as tubercle, broncho-pneumonia, syphilis, hypotrophy, etc., the amount of urea was below half a gramme. Putting aside acute grave gastro-intestinal disturbance in which the amount of urea is always high, and taking into consideration only subacute or chronic cases, azotæmia is found in athrepsia but not in the other cases. According to Widal the principal symptoms suggestive of azotæmia were progressive dry cachexia, drowsiness and anorexia, which formed a syndrome indicative of "the athreptic form of azotæmia in infants."

Radiography in the Pulmonary Tuberculosis of Infants.—MM. Ribadeau-Dumas, Weill and Maingot read an interesting paper illustrated by diagrams showing shadows made by pulmonary foci, enlarged glands, peribronchial sclerosis or pleurisy. They insisted on the frequency of tuberculous lesions at the base of the lung at an early age at which the occurrence of tubercle was about 13 per cent. Auscultatory signs were usually absent but the cuti-reaction was invariably positive.

Heliotherapy in Tuberculous Peritonitis: Three Serious Cases rapidly Cured.—M. d'Oelnitz, of Nice, reported these cases. Ascitic forms extending rapidly without marked constitutional symptoms were rapidly influenced by the sun-cure. It was otherwise with grave ulcerative forms, in which the reaction was apt to be excessive and dangerous. This treatment also gave excellent results in subacute forms with fever in the early stages.

Autopsy on a Case of Congenital Hemispasm of the Lower Lip.—MM. Variot, Bonniot and Caillian described the histological changes, viz. intense rarefication and some atrophy of the muscular fibres, changes in the myoplasm and nuclei, and marked hyperplasia of the sarcolemma with cellular regression.

Vincent Dickinson.

Abstracts from Current Literature.

Medicine.

Epidemic poliomyelitis in Norway (*'Journ. Amer. Med. Assoc.,'* 1912, lix, *p.* 782).—**Francis Harbitz** gives a *resumé* of the history of poliomyelitis in Norway since it was first recognised as a distinct disease in 1820. The first epidemic of fourteen cases was reported by Dr. A. Christian Bull, in 1868. From 1886 the more widely known epidemics have occurred. The author takes the view that the disease is due to a virus which easily spreads from person to person. He has seen three cases of the disease among nurses in charge of cases. According to Norwegian experience the period of incubation is short—two to four days—although it may be longer. "Latent" cases the author thinks must be assumed to be possible; for example, the only case occurring in a prison population was one of a young woman who had been in solitary confinement for three months. It must also be assumed

that infection can be spread by healthy carriers. Insects (*e. g.* fleas) are possible, but not proved conveyors. Epidemics occur without reference to changed climatic conditions, but not in the cold months. They occur chiefly in rural districts and vary very much in malignancy. Preventive measures adopted in Norway (1904) include notification, isolation and treatment of each case as infectious for three weeks, with disinfection at the end of this period. REGINALD MILLER.

Acute poliomyelitis (*'Prag. med. Woch.,'* 1912, XXXVII, *p.* 203).—**Thure Hellström** gives a short account of the Swedish epidemic which broke out in the spring of 1911. The majority of the patients in the hospital were children from seven weeks to eleven months old. The initial symptoms were fever, vomiting, and headache. Diarrhœa was unusual. There were several cases of difficulty in micturition requiring the catheter. Sleeplessness was a troublesome symptom in the older children and adults. Paralysis was of course the most terrible symptom. There was extraordinary diversity in the character of the disease. Paralysis of the lower extremity was the commonest form; paralyses of the cerebral nerves occurred, and some patients died from a hindrance to respiration either through the paralysis of the muscles or of the respiratory centre. The mortality was 20 per cent. No proof of direct contagion could be obtained in men or monkeys. The patients were kept as a rule four weeks in the hospital, and compulsory notification was ordered. Every care was taken to avoid contagion through the staff or the patients. When a case occurred in a school the whole class, including the teachers, had to remain fourteen days at home; the school-room and the books, furniture, etc., were disinfected. When circumstances allow the unaffected children, after control, should be sent away from the infected area, but visits must be forbidden. M. D. EDER.

Infantile paralysis (*'Lyon. méd.,'* 1912, CXIX, *p.* 788).—**J. Froment** maintains that the symptoms and clinical course of epidemic infantile paralysis are incontestably different from those of sporadic cases. Abnormal forms are frequently seen during epidemics but less frequently than the classical form. Participation of the meninges is constant in the initial stages of the epidemic form. In spite of the clinical differences both forms are one and the same disease. Investigations with regard to the antibody, serum diagnosis and experiment completely establish the identity of the abnormal and classical form. Pathological research confirms this; the lesions are multiple and diffuse, so that the term "acute anterior poliomyelitis" is not an exact one. A lesion of the motor cells of the anterior horns constitutes the essential lesion, but it cannot in any case be considered the only lesion, nor even the primary one. VINCENT DICKINSON.

Sporadic and epidemic poliomyelitis (*'Med. Record,'* 1912, II, *p.* 237).—**W. H. Thomson** is of opinion that sporadic and epidemic poliomyelitis differ from one another as much as smallpox and urticaria or rheumatism and gout. This view he bases on the differences found post mortem in the two conditions and upon the communicability of the epidemic disease. He urges that the epidemic disease should be more closely investigated when it makes its appearance in sparsely populated districts, since the overcrowded condition of cities renders it impossible to trace contagion with certainty. He thinks that were this done the contagiosity of the epidemic disease would be much more clearly established. REGINALD MILLER.

The cerebro-spinal fluid and blood in acute poliomyelitis (*'Amer. Journ. Dis. Child.,'* 1912, III, *p.* 153). **G. Draper** and **F. W. Peabody** examined 233 cerebro-spinal fluids from 69 cases and the blood of 71 cases with the following results: The cerebro-spinal fluid during the first few weeks after onset of symptoms shows in the great majority of cases deviation from the normal. Fluids in the early stages, especially before the onset of paralysis, show an increased cell count with a low or normal globular content. The polymorphonuclears at this stage may form 90 per cent. of the total, but most fluids show lymphocytes and large mononuclears almost exclusively. After the first few weeks the cell count usually drops to normal, and there is frequently an increase in the globulin content. A slight increase in globulin may persist for seven weeks or more. Analogous changes are found in the cerebro-spinal fluid of abortive cases. The blood showed a constant and marked leucocytosis, in several cases as high as 30,000. In only one was there leucopenia. Besides the increase in total cells there is an equally constant increase of polymorphonuclears of 10 to 15 per cent. above the normal, and a diminution of lymphocytes of 15 to 20 per cent. The other forms of leucocytes show no abnormalities. J. D. Rolleston.

Symptomatology of infantile paralysis (*'Amer. Journ. Obst.,'* 1912, LXV, *pp.* 509 and 704).—**Jacolyn Manning**, in two articles comprising some thirty-eight pages, gives an excellent account of acute polioencephalo-myelitis. Many illustrative cases chiefly drawn from recent American epidemics are given, and the symptomatology of the disease as detailed here reflects the serious nature of some of the epidemic examples. Amongst much that is interesting the author's classification, modified from the work of others, deserves mention. The following types are described: (1) Arrested type (the "abortive" type of other authors); (2) spinal myelitic type; (3) acute ascending or descending spinal paralysis (Landry); (4) acute bulbar type; (5) encephalic type; (6) meningitic type; (7) neural type; (8) rapidly fatal institutional disease type. Reginald Miller.

An analytical study of twenty cases of infantile paralysis (*'Arch. Pediat.,'* 1912, XXIX, *p.* 155).—**A. Sophian** states that in anterior poliomyelitis the bright and rational mental condition contrasts strikingly with that of the dull and stuporose condition in meningitis. Slight neck rigidity and a little marked Kernig phenomenon differentiate the former from the latter. In poliomyelitis the temperature drops and the general condition improves with the onset of the paralysis, but in meningitis the palsy is accompanied by high temperature. In polioencephalitis the patient is dull and stuporous, but is clear and intelligent on being roused, contrasting with the disorientation, irritability and hyperæsthesia of the meningitic. The author lays stress on Macewen's sign—a tympanitic wooden note obtained on percussion over the fronto-parietal region, denoting hydrocephalus and frequently accompanied by ataxia. Polioencephalitis differs from tuberculous meningitis, its acute onset, its frequently extensive paralysis, and comparatively unimpaired sensorium. The author had three cases belonging to the myelitic, one to the Landry type, four abortive cases, twelve polioencephalitic forms; of the latter, five were hemiplegic, and two had ophthalmoplegia. The cerebro-spinal fluid is usually clear, but sometimes bloody. Globulin is present in the early stages, and may persist throughout the disease. With the onset of paralysis it usually disappears. The cells are moderately increased in the acute stages with a high lymphocytosis, while in

tuberculous meningitis there is a uniformly strong globulin reaction and a high cell-count. The fluid is always sterile in infantile paralysis.

CHRISTOPHER ROLLESTON.

Rapidly fatal institutional form of acute poliomyelitis (*'New York Med. Journ.,'* 1912, I, *p.* 1322).—**Jacolyn Manning** calls attention to th group of cases of acute polioencephalo-myelitis which were described under the above title by Macalister in the BRITISH JOURNAL OF CHILDREN'S DISEASES in 1905, II, *p.* 105. Very little more is known about this type of disease than at that date. Apparently no pathological evidence is yet forthcoming to support the view that these are cases of poliomyelitis attacking the respiratory and medullary centres. So little notice has been taken of this group of cases since our knowledge of poliomyelitis has increased that it is well that attention should be called to them again, in the hope of getting their nature investigated. The author quotes the occurrence of eight cases of sudden and unexplained death in babies in a Brooklyn institution in February, 1912, and suggests that they may have been examples of this type of poliomyelitis. Some of the cases quoted by Macalister were, however, of a more convincing nature, and showed the well-known seasonal incidence of poliomyelitis.

REGINALD MILLER.

Atypical incipient poliomyelitis (*'Med. Record,'* 1912, I, *p.* 563).—**H. B. Sheffield**, in discussing the diagnosis of atypical cases of poliomyelitis, adverts to the changes in the symptomatology of the disease brought about by modern epidemics. He gives good examples of atypical cases and describes the difficulties experienced in their diagnosis. The article is well illustrated.

REGINALD MILLER.

Pain in Heine-Medin's disease (*'Monatsschr. f. Kinderheilk.,'* 1912, X, *p.* 630).—**E. Tezner** finds in the initial stage of this disease there are four kinds of pain: (1) Hyperæsthesia of the skin; (2) spontaneous pains in the diseased extremities; (3) pains in the spine; (4) pressure pains in the peripheral nerve-trunks and muscles. He considers that these pains should be alleviated as quickly as possible by morphia.

F. R. B. ATKINSON.

Pathological changes of the pharyngeal mucosa an early symptom pathognomonic of poliomyelitis (*'New York Med. Journ.,'* 1912, II, *p.* 519).—**M. Neustaedter** states that, in the prodromal stage of poliomyelitis, we meet with the following constant symptoms: sudden onset, with fever, headache, drowsiness, pain in extremities on passive motion and on pressure along the spinal column, sometimes gastro-intestinal disturbances, sneezing, an anæmic, glistening, œdematous condition of the pharyngeal mucosa, with a serous, frothy transudate. The author lays stress upon this pharyngeal condition as, in his opinion, pathognomonic of the disease. If a lumbar puncture be made, the cytological findings will show a lymphocytosis, a positive reduction test with Fehling's solution, and a positive globulin reaction in the cerebro-spinal fluid.

MACLEOD YEARSLEY.

Pathologic study of a case of acute poliomyelitis (*'Journ. Amer. Med. Assoc.,'* 1912, LIX, *p.* 1180).—**A. L. Skoog** examined the brain and spinal cord of a case of a male, aged 19 years, who had died from this disease, and found that the coats of the smaller arteries were involved in the

inflammatory infiltration, and also that there existed an hydrops of an anterior horn-cell. He finds the perivascular tissue is most frequently and severely affected, and the adventitia nearly as frequently. All the coats of the veins are often affected. The large arteries show only perivascular changes, the moderate sized ones changes in the adventitia also, and the small arteries or arterioles changes in all their coats.

F. R. B. Atkinson.

The pathology and epidemiology of polioencephalo-myelitis (*'Birm. Med. Rev.,'* 1912, xx, *p.* 69).—**Leonard Parsons** discusses the modern view of this disease and the recent researches into its causation and spread. After rehearsing the evidence in favour of spread by direct contact where the disease appears in epidemic form over a small area, he shows that in larger areas, as in London or Birmingham, there is little to suggest that the spread of the infection is by this means. He was not able to trace in these districts any cases to bathing. He regards previous exanthemata as playing practically no part in predisposing to the disease, not 5 per cent. of his cases having suffered from an acute specific fever within three months of the onset of paralysis.

Reginald Miller.

A contribution to the ætiology of poliomyelitis (*'Journ. Amer. Med. Assoc.,'* 1912, lix, *p.* 785).—**M. Neustaedter**, from experimental evidence, concludes that the lymphatic circulation is the primary route for the infection of the central nervous system by poliomyelitis; the blood-stream he regards as a secondary route. The lymphatic circulation might be infected through the nasopharynx, lungs, or alimentary canal. The last two portals he excludes, and reviews his well-known experiments in support of the nasopharyngeal route of infection (*vide* British Journal of Children's Diseases, 1912, ix, *p.* 234). His view and work have received much support by the recovery of the virus in a viable state from the nasal, buccal, tracheal and intestinal mucus of twenty-one patients suffering from the disease by Kling, Wernstedt and Pettersson. Neustaedter has found that a very large percentage of his patients with poliomyelitis show a neuropathic taint in their families. Methods of dissemination of the virus and of the prevention of such dissemination are discussed.

Reginald Miller.

The mode of infection in epidemic poliomyelitis (*'Journ. Amer. Med. (Assoc.,'* 1912, lix, *p.* 1371).—**S. Flexner** considers the disease is transmitted by a virus that enters and escapes from the body by the mucous membrane of the nose and throat, and can be transported by active infected carriers, and probably by healthy passive carriers of the specific virus. Its extension is limited by a high natural insusceptibility to infection existing at all ages.

F. R. B. Atkinson.

Possible transmission of poliomyelitis through the dog (*'Journ. Amer. Med. Assoc.,'* 1912, lix, p. 2312).—**H. F. Langhorst** suggests that in addition to the transmission of the disease by dust and flies poliomyelitis may be acquired through the dog. The writer bases his theory on the fact that dogs are numerous in the countries which have suffered most from poliomyelitis, and that dogs are also more numerous in country districts where the disease is most prevalent. Two cases are quoted in support of this view. One was a man whose dog had been unable two or three weeks previously to stand on its hind legs. On one or two occasions the dog had

licked his hand, on which there were a few scratches. The man contracted the disease and finally died. The other case was a boy, aged 6 years, whose extremities, chest and neck muscles became involved three weeks after he had been bitten by a pet dog. At the time of writing the patient was gradually recovering. T. R. Whipham.

The possible agency of the bed-bug, Cimex lectularius, in transmitting poliomyelitis (*'Med. Times,'* 1912, xl, *p.* 112).—**J. V. V. Manning** regards inoculation as the most likely method of infection of man with poliomyelitis, and looks with grave suspicion on the bed-bug, which he would have termed "*Cimex paralyticus.*" That the bed-bug can migrate from the sick to the healthy was proved by an adventure of his own, wherein he saw such an insect leave a sick man and proceed, "with the lurching gait of the distended bug," towards a lady, a goal which it did not live to reach. Statistical evidence of spread of infection in this way is not very satisfactory as yet; in the Massachusetts epidemic of 1909 only 20 per cent. of the families were known to have been exposed to attacks of *cimex.*

Reginald Miller.

Subdural injections of epinephrin in experimental poliomyelitis (*'Journ. Amer. Med. Assoc.,'* 1912, lix, *p.* 367).—**P. F. Clark** states that epinephrin, when injected into the spinal subdural space, has proved to be of value in experimental poliomyelitis, in particular prolonging life in moribund cases. He thinks that in the human disease such injections might be beneficial, especially in the ascending type of the disease. The drug acts by controlling exudation by its action on the blood-vessels.

Reginald Miller.

Sudden death following spinal puncture for diagnosis (*'Med. Record,'* 1911, i, *p.* 487).—**E. Colie** records a case of death following lumbar puncture in an infant, aged 16 months. The child was extremely ill previous to the operation; "at rounds the child was presented as a moribund case of gastro-enteric infection; the little one was in profound coma." Lumbar puncture was performed at once as there were signs of cerebral compression and 10 c.c. of clear fluid were withdrawn. Five minutes later the child became rigid and asphyxiated and died within an hour. Post mortem there was revealed a cerebral abscess. Reginald Miller.

Macroscopically latent meningitis and encephalitis in acute infections (*'Beitr. z. path. Anat. u. z. allg. Path.,'* 1912, lii, *p.* 540).—**S. Oseki** records four groups of cases, seven of which occurred in children, aged from 9 weeks to 15 years, suffering from pneumonia, tonsillitis, or tuberculosis. In the first group, though meningitis was diagnosed clinically, there was no naked-eye evidence of the condition post mortem; microscopically, however, meningitis and encephalitis were found. In the second group, in which meningitis was diagnosed clinically, encephalitis only was found post mortem on microscopical examination. In the third group meningitis only was found. In the fourth group meningo-encephalitis or meningitis which had been latent during life was found post mortem microscopically.

J. D. Rolleston.

Meningitis due to bacillus typhosus (*'Med. Press and Circ.,'* 1912, i, *p.* 646). –**J. F. O'Carroll** and **F. C. Purser.**—A boy, aged 9 years, was

admitted to hospital as a case of typhoid fever. The abdomen was distended and the urine was cloudy, but the spleen was not enlarged and there were no rose-spots. Widal's reaction was positive. Lumbar puncture gave issue to a slightly turbid fluid without hypertension, containing 1100 leucocytes per millimetre, two thirds of which were polymorphonuclears and one third mononuclears, a few bacilli, mainly intra-cellular, which gave the reactions of the typhoid bacillus. Death preceded by nuchal rigidity and Kernig's sign took place three weeks from the onset. Necropsy: Intestinal lymphoid tissue congested but nowhere ulcerated. Spleen normal; meninges and convexity of brain covered with greenish-yellow exudate from which a bacillus similar to that obtained by lumbar puncture was isolated. J. D. Rolleston.

Epidemic cerebro-spinal meningitis in the infant (*'Thèses de Paris,'* 1912-13, *No.* 109).—**G. R. G. Badaud**.—Epidemic cerebro-spinal meningitis is very frequent in the infant. It differs from that in the adult by its insidious onset, the frequency of digestive troubles at the beginning of the disease, and by the inconstant or ill-marked character of ordinary signs of meningitis, the characteristic manifestation of the disease when at its height being an intense rigidity of the whole body. Numerous varieties are met with, *e. g.* a fulminating form, a relapsing form, which may end in recovery or cachexia with hydrocephalus and death, an abortive form, a convulsive form, a hyperæsthetic form and a tetanic form. Owing to its insidious character and the variability of its symptoms the disease must be distinguished from gastro-enteritis, pneumonia, tetanus, tetany, acute encephalitis, the meningeal form of poliomyelitis, meningeal hæmorrhage and acute meningitis. Diagnosis is to be made by lumbar puncture. The prognosis is extremely grave. Treatment consists in an early and liberal use of serum. The thesis contains the histories of twenty-one cases, fifteen of which are original. J. D. Rolleston.

Parameningococcic meningitis in an infant (*'Bull. et mém. Soc. méd. Hôp. de Paris,'* 1912, xxxiii, *p.* 777).—**P. Menetrier** and **P. Brodin** record a fatal case in a female infant aged $6\frac{1}{2}$ months. The symptoms were those of cerebro-spinal meningitis at that age, viz. insidious onset, late appearance of definitely meningeal signs and intensity of ocular manifestations. The cerebro-spinal fluid was clear at first and then slightly turbid. It showed a polynucleosis at the onset and finally lymphocytosis. The micro-organism found was present in much greater numbers than in cerebro-spinal meningitis due to the meningococcus, which it resembled in its morphological and cultural characters, but was distinguished from it by the agglutination and precipitation reactions. Anti-meningococcic serum was useless as in all recorded cases of parameningococcic meningitis, which hitherto has always been fatal. J. D. Rolleston.

Parameningococcic infections and anti-parameningococcic serum (*'Bull. et mém. Soc. méd. Hôp. de Paris,'* 1912, xxxiii, *p.* 828).—**Dopter** has collected twelve cases of parameningococcic meningitis. Clinically they resemble meningitis due to the meningococcus, but anti-meningococcic serum is of no avail, and hitherto all the cases have ended fatally. Dopter has recently prepared an anti-parameningococcic serum which has proved successful in the two cases in which it was tried. J. D. Rolleston.

Parameningococcus septicæmia treated by anti-parameningococcus serum (*'Bull. et mém. Soc. méd. Hôp. de Paris,'* 1912, xxxiii, *p.* 829).

—**Barrel, Coulomb** and **Couton**.—A boy, aged 9 years, presented symptoms of a general infection which at first resembled typhoid fever. On the twentieth day transitory meningeal symptoms developed. Slight improvement followed injection of antimeningococcic serum but the general condition remained grave and resembled septicæmia. A blood-culture showed the presence of the parameningococcus. Rapid improvement and complete recovery followed subcutaneous injection of an anti-parameningococcic serum prepared by Dopter. The true meningococcus was found in the rhinopharynx, which probably explains the improvement produced by the injection of meningococcic serum. J. D. Rolleston.

The ætiology of convulsions in early life (*'Arch. of Pediat.,'* 1912, xxix, *p.* 803).—**F. M. Crandall.**—(1) Predisposing causes: (*a*) Age. Infancy and early childhood predispose to the disease, convulsions being frequent during the first seven years and rare thereafter. (*b*) Heredity. (*c*) Rickets should be sought for in every case of convulsions. (2) Exciting causes: (*a*) Organic diseases, meningitis, hydrocephalus, hæmorrhages, etc. (*b*) Reflex. Dentition alone very rarely causes convulsions, and the same applies to phimosis. Irritating masses of food may induce convulsions reflexly, but more commonly they are a symptom of toxæmia. (*c*) Toxic, as uræmia and infectious diseases, and, as just stated, undigested food. This is the most frequent cause. F. R. B. Atkinson.

Epileptic convulsions and adenoids (*'Arch. de méd. des enf.,'* 1912, xv, *p.* 691).—**Pignero**, after quoting other observations of Thomson, Guesse, and Suarez de Mendoza, relates the case of a boy, aged 13 years, the child of arthritic parents, well-developed and healthy, who showed epileptic symptoms culminating in an epileptiform convulsion. Bromide treatment had a negative result. Adenoids were found and removed. No further attacks occurred, the case being reported four years later.

Macleod Yearsley.

A case of status epilepticus with an unusually large number of convulsions (*'Journ. Amer. Med. Assoc.,'* 1912, lviii, *p.* 857).—**S. A. Smith** describes a fatal case in a girl, aged $8\frac{1}{2}$ years. The patient suffered from 1649 *grand mal* seizures in four and a half days, the largest number in any one twenty-four hours being 573 convulsions.

F. R. B. Atkinson.

Post-hemiplegic epilepsy (*'Presse méd.,'* 1912, xx, *p.* 442).—**d'Espine** showed two patients at the Medical Society of Geneva suffering from this condition. Case 1: At the age of two convulsions with hemiplegia occurred, and at the age of five epileptic crises. There was exaggeration of the reflexes of both upper and lower limbs. Case 2: Boy aged $6\frac{1}{2}$ years; normal up to the age of four, when a fall on the occiput produced encephalopathy with meningeal symptoms and a left hemiplegia. The auditory nerve was paralysed, and he suffered from verbal amnesia. Jacksonian epilepsy developed on the left side and became generalised. F. R. B. Atkinson.

A case of trephining in epilepsy (*'Austral. Med. Gaz.,'* 1912, xxxii, *p.* 4).—**R. M. Curtis** narrates the case of a girl, aged 14 years, suffering from *status epilepticus*. Trephining was performed over the "neck" area of the right Rolandic convolution and the dura mater opened. Cure rapidly took place. F. R. B. Atkinson.

Otology, Rhinology, and Laryngology.

Diphtheria of middle ear (*'Wien. klin. Woch.,'* 1912, xxv, *p.* 1385).—**O. Bénesi** records a case of purulent non-membranous otitis media due to diphtheria bacilli in a girl, aged 19 years, who had had otorrhœa on and off since she was two months old. The diphtheria bacilli were probably a secondary infection, having gained entrance to the ear by the Eustachian tube. There was no evidence or history of faucial diphtheria. Recovery followed operation without antitoxin being used. J. D. Rolleston.

Meningococci in ear discharge (*'Münch. med. Woch.,'* 1912, lix, *p.* 1955). —**Doering** records two cases of girls aged 11 years and 9 months respectively, in whom at an operation for mastoid abscess meningococci were found in the pus in the antrum. There was no clinical evidence of meningitis. Both recovered. Whether the meningococci were the cause of the mastoid abscess or were a secondary infection is an open question. The cases illustrate the importance of making a bacteriological examination of every case of ear discharge. J. D. Rolleston.

The significance and management of chronic discharging ears (*'Med. Record,'* 1912, ii, *p.* 697).—**Braun** goes over the old ground, which cannot be enough reiterated. He notes the need of educating the general practitioner to rid him of the absurd superstitions still held about discharging ears and he enumerates the dangers of suppuration. In regard to management, he divides cases, after elimination of tonsils, adenoids, syphilis, tubercle and malnutrition, into two classes: those in which the disease is confined to the tympanic mucosa and those in which bone is involved. The pros and cons of the mastoid operation are discussed. He condemns the so-called "Heath" operation as based on bad surgical principle.

Macleod Yearsley.

A large abscess of the temporo-sphenoidal lobe, complicating a chronic purulent otitis media, without any symptoms except an occasional rise of temperature (*'Med. Record,'* 1912, ii, *p.* 935).—**R. Lewis** reports this case in a girl, aged 8 years. The original suppuration was due to scarlet fever and had lasted two years. Severe earache and general headache were present for a few days before admission to hospital. A radical mastoid operation was followed by rises of temperature to 104° F. or 105° F. No other symptoms until the twenty-fourth day, when she had slight headache. A second operation then revealed a temporo-sphenoidal abscess containing about three ounces of foul pus. The child made a rapid recovery. Macleod Yearsley.

A case of mastoiditis followed by general sepsis, with symptoms of tetanus (*'Arch. of Ped.,'* 1912, xxix, *p.* 585).—**M. Nicol, jun.,** and **F. S. Fielder.**—This case occurred in a girl, aged 4 years, who was reported as a case of tetanus probably due to vaccination two weeks previously, but tests of the vaccine used gave negative results. She was given 17,000 units of tetanus antitoxin intra-venously and 9000 units two days later. Left tympanic membrane was found to bulge and was incised; no pus found. She died eleven to twelve days after the onset of first symptoms. Post mortem there were found double middle-ear suppuration and mastoiditis, inflammatory œdema

of scalp, commencing hæmorrhagic lobular pneumonia, persistent thymus, acute parenchymatous hepatitis and nephritis; moderate pial œdema. The very great prominence of tetanic symptoms coming on early in the disease with a history of recent vaccination is given as an excuse for failing to arrive at the correct diagnosis. MACLEOD YEARSLEY.

The pro and con of maintenance of the retro-auricular opening after the radical mastoid operation (*'Med. Record,'* 1912, II, *p.* 975).—**S. Oppenheimer** thinks that, in the majority of cases, there is no question as to the closure of the retro-auricular incision. The development of methods of removal of disease and of plastic manipulations of the meatus has eliminated many cases in which maintenance of the retro-auricular fistula might have been expedient. The main disadvantages of such fistulæ are cosmetic in character. At present the main necessity for them is in extensive diffuse mastoid cholesteatoma. Maintenance of a fistula is of great importance when it is necessary to expose the sinus or the cranial dura or both. It may also be of temporary use when there are indications of the development of perichondritis of the cartilage of the external auditory canal. A permanent opening is "undoubtedly indicated with specific granulomata accompanied by more or less extensive destruction of both the soft and osseous tissues." MACLEOD YEARSLEY.

Myofibroma of the naso-pharynx (*'Medical Record,'* 1912, II, *p.* 451).—**J. H. Bryan** reports an instance of this tumour in a girl, aged 12 years. It was removed with the old wire snare under general anæsthesia and measured 3 in. It was probably attached just above the posterior end of the right middle turbinal. Such growths in the naso-pharynx in children are uncommon. MACLEOD YEARSLEY.

Adenoids in infants (*'Thèses de Lyon,'* 1910–11, *No.* 119).—**M. Durif** follows Marfan in regarding rickets and adenoids as closely associated, both being due to chronic intoxications in early life, inherited or acquired (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1907, IV, *p.* 504). After a description of the ordinary symptoms of adenoids, Durif discusses a latent form manifested only by reflex phenomena, such as spasm of the glottis, asthmatic attacks and nocturnal cough, which are due to irritation of the superior laryngeal or recurrent laryngeal nerves by the vegetations. Diagnosis is easy as a rule. Doubts as to the presence of a large thymus can be settled by X rays. The prognosis is grave chiefly on account of complications, especially otitis media. In mild and uncomplicated cases medical treatment is sufficient; in others removal in one or more sittings is indicated. The thesis contains the histories of thirty cases in infants aged from two months to two and a half years. J. D. ROLLESTON.

The "intoxication" factor in the genesis of adenoids (*'Rev. Hebd. de Laryng.,'* 1912, II, *p.* 1).—**Pistre** concludes that hyperplasia of the lymphoid tissue of the pharynx constitutes the visible proof of a defensive struggle of the infantile organism against a chronic intoxication, hereditary or acquired. It forms an integral part of a complex syndrome, often obscure—rickets—which first affects the bone-marrow, then almost immediately afterwards the lymphoid organs, and only very late the liver, the spleen and the other glands. In the case where the organism of the child is profoundly damaged, adenoidectomy gives only mediocre results from the point of view

of the ulterior somatic development. It must be completed, not only by appropriate respiratory exercises and a general hygienic and dietetic treatment, but by a true cure of polyglandular opotherapy according to the method of Dupuy.

MACLEOD YEARSLEY.

Removal of adenoids as a preventive measure after exposure to measles (*'Med. Record,'* 1912, II, *p.* 388).—**J. B. Greene,** appreciating the great danger of a suppurating ear complicating measles in the presence of a large adenoid, believes that, in such adenoid cases, surgical intervention becomes conservative treatment after exposure to measles. He quotes a case in support of his contention, which is a very reasonable one.

MACLEOD YEARSLEY.

On retro-pharyngeal abscess during the first year of life (*'Arch. de méd. des enf.,'* 1912, XV, *p.* 916).—**J. Dandoy** alludes solely to suppurative retro-pharyngeal adenitis. The gland infection may be staphylococcic, or more often streptococcic, the organisms entering by an erosion of the mucous membrane. The abscess is not always recognised, and its termination is often fatal progressive asphyxia, general infection, pulmonary complications, or inanition. Fever is moderate, and examination of chest and abdomen yields negative results. The most constant sign of the abscess is the presence of mucosities in the throat which prevent a view of the deep part of the pharynx. In such cases palpation with the fingers should be practised. As regards treatment, evacuation alone gives any hope.

MACLEOD YEARSLEY.

Epidemic of sore throat with involvement of the cervical lymph-nodes (*'Amer. Journ. Dis. Child.,'* 1912, IV, *p.* 301).—**J. Ruhräh** describes this epidemic, the lessons to be learned from which are: (1) a streptococcus infection may be caused by infected milk, and this disease may be exceedingly severe and attended with numerous complications and fatalities. (2) Even in cold weather milk may be the source of the disease. (3) No matter how carefully raw milk is handled, it may at times be a source of danger. (4) The milk supplied to cities should be pasteurised, and where by accident the dairy company cannot so treat its milk, it should be compelled to notify its consumers, so that they can either pasteurise or boil the milk.

MACLEOD YEARSLEY.

Vincent's angina in children (*'Laryngoscope,'* 1912, XXII, *p.* 1356).—**J. A. Mulholland** reports on twenty-four cases which occurred in the course of eight months at the New York Foundling Hospital, where all the children are under five years of age. Practically all the cases came from the same nursery, but, as in the abstracter's cases (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1910, VII, *p.* 299), none of the nurses contracted the disease. All recovered except one—a child much weakened by severe measles—who developed noma. Mulholland thinks that Vincent's angina is fairly contagious and that institution life favours its spread.

J. D. ROLLESTON.

Gangrenous angina (*'The Antiseptic,'* 1912, IX, *p.* 533).—**J. D. Rolleston.**—This is a rare affection, the frequency of which was considerably over-estimated prior to the recognition of diphtheria as a specific disease. Many of the cases so described were really examples of malignant diphtheria

or of scarlet fever without a rash. Probably, however, some of the fatal cases of tonsillitis at the present day are really instances of gangrenous angina. Thus among 8444 cases admitted to the Metropolitan Asylums Board Hospitals from 1899–1910 certified as diphtheria, but diagnosed after admission as various forms of tonsillitis, there were 58 deaths. The primary form of gangrenous angina is commonest in adults, while the secondary form is most frequent in children between three and six years, especially as a complication of infectious diseases. The bacteriology is unsettled. The *Leptothrix buccalis* (Lastra) and Vincent's organisms (Buday and Vezprémi) have been especially incriminated. The disease lasts as a rule two to three weeks, but may extend over some months. The complications are phlebitis of the forearm, cerebral and pulmonary embolism, broncho-pneumonia, entero-colitis and œdema glottidis. The disease must be distinguished from diphtheria and Vincent's angina, to which latter, however, it is closely related. The prognosis is bad both in the primary and secondary forms. Death is due to toxæmia or to hæmorrhage from erosion of a large vessel. Local treatment is usually futile. The success of salvarsan in Vincent's angina suggests that this drug may be of service. J. D. Rolleston.

A completed treatment for tonsillitis (*'New York Med. Journ.,'* 1912, II, *p.* 480).—**F. Griffith** objects to the excision of all tonsils as he does to the "castration of convicts at the whim of a prison doctor." He commences treatment by giving calomel in $\frac{1}{8}$ or $\frac{1}{4}$ grain doses every thirty minutes until 2 gr. are taken or the bowels are well moved. When first seen a hot mustard foot-bath is given, the patient wrapped in a blanket and put to bed. Diet light and meat excluded. Treatment extends over one, two, or three days to suit requirements. Specific treatment consists of quinine bisulphate 2 gr. with Dover's powder 5 to 10 gr. at once, then night and morning through the course. Separate and distinct is the following treatment, regulated "according to the amount of purulent exudate dripping from the infected tonsils," which exudate, the author thinks, causes the "exacerbations of systemic reaction"; one or two drops of pure carbolic acid, stirred in a quarter of a glassful (size of glass not stated) of cold water two to eight times in twenty-four hours. Local throat cleansing by gargle or spray, sucking of ice, hot poultices to the neck, the use of guaiacum lozenges and incision of an obstructing tonsil are also recommended. Subsequent tonic treatment "if necessary." Macleod Yearsley.

Indications and contra-indications for tonsillectomy (*'Journ. Amer. Med. Assoc.,'* 1912, LIX, *p.* 1112).—**L. M. Hurd** thinks tonsillectomy to be the one operation whenever the tonsils are diseased enough to demand surgical interference, and so far as hæmorrhage is concerned it probably involves less risk than tonsillotomy. The contra-indications, beside those which belong to any other small major operation, are: temperature, *status lymphaticus* and hæmophilia. Hurd is of opinion that tonsillectomy ideally done should not injure the singing or speaking voice, though a singer may have to learn to use the muscles as they are readjusted. He described one case of death in a hæmophilic boy, aged 15 years.

Macleod Yearsley.

Indications for removal of the faucial tonsils (*'New York Med. Journ.,'* 1912, II, *p.* 55).—**Harold Hays** bases his conclusions upon some 300 cases. He thinks the tonsils have a definite function in early childhood, and

that they should not be removed unless there is some especial indication before four years of age. The small buried tonsils associated with enlarged cervical glands should always be completely removed unless some other definite cause is found for the condition. Tuberculosis he considers to be often of tonsillar origin. All tonsils, large or small, which seriously interfere with respiration, should be removed, and one of the most important points to be considered in judging whether a tonsil should be removed or not is its size in relation to the individual throat. He believes that many local pathological conditions are caused by diseased tonsils, that many cases of middle-ear catarrh can be prevented by removal of the tonsils, and that there is a distinct relationship between the tonsils and many general diseases. Finally, he holds that the promiscuous removal of the tonsils of children without the finding of some associated pathological condition is pernicious, and that all cases demanding operative interference should be carefully selected. MACLEOD YEARSLEY.

Infections following tonsillotomy, with a consideration of the forms of such infections (*'Amer. Journ. Med. Sci.,'* 1912, CXLIV, *p.* 30).—**H. Koplik** calls attention to three distinct forms of sepsis following tonsillotomy. The first form runs an obscure fever for a week or more without causing any endocarditic or other lesions; in the second form, besides the raised temperature, there are manifestations of a mild infectious endocarditis, or, as in chorea, the endocarditis takes on a severe infectious or "malignant" type, with subsequent fatal issue. The third form of sepsis is that in which the infection is evidently severely hæmatogenous and causes destructive blood changes, with signs of sepsis such as profuse hæmorrhagic ecchymotic areas on the surface of the skin, petechiæ, severe hæmorrhages from the bowel, and areas of broncho-pneumonia. MACLEOD YEARSLEY.

Subacute broncho-pneumonia consecutive to tonsillectomy (*'Arch. gén. de Méd.,'* 1912, XCI, *p.* 1079).—**R. Labbé** describes a case in which subacute broncho-pneumonia was observed in a boy, aged 7 years, three days after tonsillectomy by *morcellement.* An abscess in the buttock occurred twenty-four days after the operation, the pus containing pneumococci only. The child recovered. The case is one of great interest, and its value is enhanced by the very full account which the author gives of the literature, including a case published by the reviewer, in which a boy died of pure pneumococcic septicæmia four days after removal of adenoids. MACLEOD YEARSLEY.

Subcutaneous section of the cricoid for laryngeal stenosis following intubation (*'Austr. Med. Gaz.,'* 1912, XXXII, *p.* 82).—**G. Croll** and **A. J. Turner.**—A child, aged 6 years, was admitted to hospital suffering from marked diphtheria, treated with anti-diphtheritic serum and intubation which resulted in cure. Ten days afterwards the breathing again became difficult from stenosis of the larynx, and as intubation gave no relief subcutaneous section of the cricoid was performed and intubation carried out. Recovery followed. F. R. B. ATKINSON.

Chronic laryngeal stenosis; treatment by prolonged intubation (*'Journ. Amer. Med. Assoc.,'* 1912, LIX, *p.* 1120).—**H. Dupuy** records 4 cases in children aged from one to three years. One was due to diphtheria; the others were examples of chronic hypertrophic laryngitis. One died from an

avoidable accident, and another from intercurrent broncho-pneumonia. The other two recovered. The periods of intubation varied from one month to one year. A special intubation tube was used, swollen at its lower end so as to impinge upon that portion of the subglottic and tracheal areas which is the usual site of the constriction associated with hypertrophic laryngitis. When this failed, an intubation tube was permanently fixed in the larynx by a silver pin introduced through a tracheal incision which was closed above and below the pin. J. D. Rolleston.

Tuberculosis of the larynx in children (*'Thèses de Lyon,'* 1911-12, *No.* 91).—**M. Edouard.**—Laryngeal tuberculosis is relatively rare in children. Its frequency in tuberculous children ranges from 2 or 4 per cent. according to the clinical symptoms only to 13 per cent. as ascertained by post-mortem examination. A primary form is most exceptional. The condition is chiefly found in miliary tuberculosis and in advanced pulmonary and generalised tuberculosis. Its pathogeny varies. In miliary tuberculosis infection occurs by the blood-stream, while in some of the cases where the pharynx is simultaneously involved the lymphatics convey the infection. Inoculation by the sputum may take place in children as in adults. The earliest symptom is usually dysphonia, and is followed by laryngeal pain, dysphagia, and an intermittent, dry, hoarse cough. Dyspnœa, however, which may be of sudden onset, is the predominant symptom, and is more marked than in the adult, partly from the narrowness of the larynx and partly from the frequency of spasmodic phenomena in children. The clinical forms are the granular (the most frequent), the infiltrating and ulcerative, the ulcero-œdematous, the pharyngo-laryngeal, the vegetative, tuberculous tumour of the larynx, the subglottic and the perichondritic. Diagnosis must be made in a few rare cases of sudden onset from diphtheria and suffocative laryngitis, in the vegetative forms from papilloma, and in other cases from congenital syphilis of the larynx and compression by lymphatic glands. The prognosis is very grave. The course is always rapid and rarely exceeds eighteen months. Death frequently occurs in a few months or even weeks. In Nobécourt and Tixier's case (*vide* British Journal of Children's Diseases, 1910, vii, *p.* 27) the duration was only four days. The treatment is that of pulmonary tuberculosis. Owing to the difficulty of local applications and the frequency of asphyxial attacks tracheotomy is often indicated. The thesis contains the histories of eleven cases, four of which are original, in children, five males, six females, aged from 1½ months to 14 years. J. D. Rolleston.

Direct laryngoscopy and tracheo-bronchoscopy in children (*'Jahrb. f. Kinderheilk.,'* 1912, lxxvi, *Erg.-Heft, p.* 131).—**M. Paunz** records 50 cases in children aged from 3 months to 10 years in which these methods were used for laryngeal syphilis, papillomata of the larynx, congenital laryngeal stridor, laryngeal and bronchial foreign bodies, descending tracheal diphtheria, tuberculosis of the tracheo-bronchial glands and peritracheal and peribronchial abscesses. Brünings' electroscope and tubes were used, and the examination was always carried out under deep chloroform narcosis, followed by application of 5–10 per cent. solution of cocaine and a few drops of suprarenal extract to the pharynx and larynx. The direct method was found to be of great value, the best results being obtained in the cases of foreign bodies. J. D. Rolleston.

Two cases of foreign bodies removed from the bronchi (*'Siglo med.,'* 1912, lix, p. 548).—**Tapia** removed by superior bronchoscopy a foreign body

from the right bronchus of a child, aged 5 years, who had inhaled it a year previously. The clinical diagnosis had been confirmed by radioscopy. The child was put in Mickulicz's position, and Killian's tubes (7 mm. by 25 cm.) were used. In the second case a foreign body was removed from a child, aged 8 years, by peroral bronchoscopy from the right bronchus. A fenestrated forceps was used with one blade fixed and the other movable. The steps of the two operations are fully described. Perfect and rapid recovery took place in both cases. M. D. Eder.

Report of a case of bronchoscopy for multiple foreign bodies (almond shell and pulp) in a child two years of age (*'Med. Record.,'* 1912, II, *p.* 453).—**J. R. Winslow.**—The girl cried and her mother noted her cyanosis and embarrassed respiration. She cleared the throat of almond shell and pulp with her finger and relieved her, but the embarrassment returned. On examination under cocaine, the smallest bronchoscope available would not pass, and tracheotomy with lower bronchoscopy was done next day. Much milky pulp was removed from the left lower lobe bronchus; the upper lobe bronchus could not be entered. Broncho-pneumonia, lasting eight days, followed. Discharged from hospital on the thirteenth day, she developed influenzal pneumonia a month later, following which the wound opened spontaneously and she coughed up an oval piece of almond kernel 6 by 3 mm. She then slowly and fully recovered.

Macleod Yearsley.

Stricture of œsophagus (*'Berl. klin. Woch.,'* 1912, XLIX, *p.* 2405).—**A. Réthi.**—A girl, aged 15 years, had had difficulty in swallowing since an attack of diphtheria at the age of three years, complicated by a peri-œsophageal abscess which had broken externally. A large transverse scar in the neck was still present. On passing an œsophageal sound, obstruction was met with at the depth of 18 cm. The stricture was gradually dilated by a Brünings' œsophagoscope, and in three weeks the sound could be passed through it without the œsophagoscope. Complete recovery took place in one and a half months. Réthi alludes to the rarity of œsophageal diphtheria, and quotes the case reported by the abstracter (*vide* British Journal of Children's Diseases, 1912, IX, *p.* 12). J. D. Rolleston.

Œsophageal atresia and communication between stomach and trachea (*'Jahrb. f. Kinderheilk.,'* 1913, LXXVII, *p.* 93).—**Pollak** showed this specimen from a child, aged 7 days, at the Vienna Gesellschaft f. inn. Med. und Kinderheilk. The child vomited after every feed and never had any milk stools. A sound revealed occlusion of the œsophagus. Gastrotomy was performed, and after introduction of food into the stomach part was returned by the mouth. As the œsophagus was closed, the food must have reached the mouth by a communication between the stomach and trachea.

J. D. Rolleston.

Reviews.

Handbuch der Nervenkrankheiten im Kindesalter. (Handbook of the Nervous Diseases in Childhood.) By Profs. L. Bruns, A. Cramer, T. Ziehen. Berlin: S. Karger, 1912. Price M. 30; bound, M. 32·50.

This work is divided into three parts:

(1) By Cramer, dealing with mental defect and the functional diseases of the nervous system.

(2) By Bruns, dealing with diseases of the spinal cord, peripheral nerves and muscles.

(3) By Ziehen, dealing with diseases of the brain and membranes.

The introduction states that there are two methods of considering the subject matter in hand—either by limiting the scope of the work to those diseases which may be said to be specific to children, such as spinal caries, diplegia, birth injury, etc., or while including these by dealing also with some diseases which occur but rarely during childhood, viz. tumour of the spinal cord and myelitis.

The title of the book is *not* the nervous diseases *of* childhood, but nervous diseases *in* childhood, and such a work will, it is thought, be more generally useful than a work limited to the nervous diseases of childhood.

The first section of the work deals with the mental defects and what are commonly called the functional affections of the nervous system of children. The "nervous" and the "psychopathic" child is considered, together with hysteria, epilepsy, chorea, stuttering and the tics. Each of these subjects is exhaustively dealt with, and the only criticism that could be advanced is that many of the conditions described are rarely, and in some cases one might say never, seen among English children.

The second part of the work by Bruns deals with the diseases of the spinal cord and peripheral nerves and also with such diseases of muscles as polymyositis, myositis ossificans and ischæmic paralysis. The first pages are devoted to the consideration of the symptoms and to the segmental localisation of diseases in the spinal cord. The section then deals with spinal caries, spinal injury, spinal syphilis and the treatment of these conditions.

The important disease acute anterior poliomyelitis is considered. A full account of the history of this disease is given from its earliest recognition, the early bacteriological work, and the recent experimental work. The author sums up as follows: "Acute poliomyelitis is an acute infective disease which is produced by a specific cause whose nature at present we do not know"; but he adds that "it is possible, and from analogy with other post-infectious nervous diseases likely, that the condition of infantile paralysis may also be produced by other bacteria and their products."

An interesting account of the rare condition juvenile tabes is given, in which Bruns points out the rarity of this affection. He had seen only two instances in 15,000 cases of nervous diseases which have been under his observation. Marburg states that it is relatively more common in girls than in boys.

Under the heading "Endogenous Diseases of the Spinal Cord" two groups of cases are discussed, "hereditary ataxia" and "hereditary family spastic paraplegia." This method of grouping these cases under one heading is excellent. It is a subject with which it is most difficult to deal, because of

the variations of the symptoms in cases which obviously have a close relationship, and the author with his wide experience has dealt with them in an admirable manner.

The next section deals with the various forms of progressive muscular atrophy of children dependent on a spinal lesion—of which the most important group is the type described by Werdnig and Hoffmann. Prof. Bruns' original observations on the subject are well known and the section is illustrated by cases which have been under his own observation. The primary myopathies are next dealt with, and the author describes the various features, dealing with them as a whole, and not dividing them into classical types. The disease described by Oppenheim under the title "Myatonia congenita" is mentioned in relation to the diagnosis of nervous diseases generally, and also in the diagnosis of progressive spinal muscular atrophy of infants; but a full description of this condition as such is not to be found. The paralytic conditions associated with spina bifida and other defects of the vertebræ and spinal cord are dealt with. The various birth palsies, ischæmic paralysis and neuro-fibromatosis (von Recklinghausen's disease), of which an excellent illustration is given, conclude this section.

The final section on diseases of the brain and membrane in childhood is written by Ziehen. The most important chapters of this section are those dealing with the cerebral palsies of children, brain tumours and meningitis.

Nearly thirty pages are devoted to the consideration of multiple sclerosis, a disease which, if it ever occurs in children, is of the greatest rarity. The chapter on brain tumours also is evidently written from the standpoint of the condition in the adult, and not that of a child. Several pages are devoted to the consideration of tumours of the cerebral hemisphere, whereas it is generally recognised that tumours of the hemisphere are exceedingly rare in childhood, whereas the lesions of the basal ganglia brain stem and cerebellum are common.

The treatise, so far as the diagnosis of cerebral tumour is concerned, is excellent, but it does not give the reader a picture of the disease as it occurs in childhood, which we take to be the object of this work.

Again, in dealing with the various forms of meningitis, it is most difficult to obtain a knowledge of how the disease is likely to occur in childhood, and to what causes they may be due. All the facts are mentioned, but it requires some search not only in the index, but also in the text, to find the points on which instruction is desired.

The work is most comprehensive and complete, but regarded from the point of view of a practitioner who desires to acquire some knowledge, either general or on a difficult point, with regard to some nervous ailment in childhood, it is disappointing. To the physician who has already considerable knowledge of the nervous ailments of children the work is of great value, for it furnishes him with a record of the rare diseases of infancy and childhood and an excellent bibliography on the various subjects from which he can, if he desires, obtain further information.

That which is written in the preface may be considered to disarm the above criticism, but a book on nervous diseases in childhood should furnish a record of the disease as it manifests itself during the earlier years of life. One's feeling is that this is scarcely a "handbook" on the nervous diseases of children, but a complete treatise on the subject, and as such is rather a book of reference than one for general reading.

FREDERICK E. BATTEN.

Diseases of the Nervous System. By Judson Bury, M.D., F.R.C.P., B.Sc. Manchester University Press: Sherratt & Hughes, 1912. Price 15s. net.

This work, which is dedicated to the past and present students of the Manchester Medical School, is an excellent introduction to the study of the diseases of the nervous system, and is the outcome of twenty years' experience in neurological instruction at the Manchester Royal Infirmary. The descriptions are both terse and lucid, and are well suited for the class of readers for whom the work was intended. The student, however, might well have been spared the account of the four stages of hysteria major, for the disease as Charcot described it is now practically extinct.

Of special interest to those concerned with the study of children's diseases are the pages dealing with infantile hemiplegia, acute poliomyelitis, the muscular dystrophies, chorea, cerebral meningitis, and the effect of hereditary syphilis on the brain and cord.

Two statements call for criticism. The first of these is in the article dealing with diphtheritic neuritis, in which the author states that no definite relation can be traced between the severity of the throat affection and the degree and extent of the paralysis. This view is too often held by neurologists, whose knowledge of the character of the acute attack is most likely to have been second-hand. Those who, like the reviewer, have kept under observation some thousands of diphtheria cases throughout their illness, are unanimous in declaring that there is a very direct relation between the initial angina and the frequency and severity of the subsequent paralysis. The other questionable statement occurs on p. 598, where we read that no good results have yet been recorded from the serum treatment in posterior basic meningitis. Reference, however, to the statistics collected by Flexner in America, and by Dopter in France, of cases treated by their serums, shows that the mortality in infants from cerebro-spinal meningitis, in which the posterior basic variety is included, has been reduced from 90 to 42, or even 33 per cent. (*v.* British Journal of Children's Diseases, 1909, vi, *p.* 462, and 1910, vii, *p.* 42).

The printing and get-up of the book are excellent.

Among the numerous illustrations accompanying the text, attention should be drawn to those of amyotonia congenita, enlargement of the masseters in pseudo-hypertrophic paralysis, and other figures of muscular dystrophy, bilateral facial atrophy and hysteroid convulsions in a boy of twelve.

There are a few misprints, among which "bacillus influenza" and the frequently recurring "tendo Achilles" will jar on the student fresh from his classical studies.

J. D. R.

The Diseases of Children. Edited by Dr. M. Pfaundler and Dr. A. Schlossmann. English Translation edited by Henry L. K. Shaw and Linnæus La Fetra. Vol. V: Congenital Diseases, Surgery, Orthopædics. Philadelphia and London: J. P. Lippincott Co. Price 21s. net.

This volume will be welcomed with pleasure, both in this country and in America. It is one of the few surgical books on children which attempt to recognise that children are not miniature adults, although in some cases even here treatment suitable only for adults has been included. The reader

will therefore find comparatively little space is taken up with crowding in conditions which are not essentially those of childhood.

The arrangement is excellent and deserves the highest praise. The type is large and clear, but the repetition of strange names in brackets after every definite statement of well-recognised fact or fanciful idea makes reading more wearisome than it need be. Illustrations are plentiful and well chosen; many of them are coloured. After reading carefully through the book, one is struck by several things which seem strange to us in this country. The first is the large number of umbilical hernias which continental surgeons find require operation. Another is the recommendation of Kocher's operation for the radical cure of inguinal hernia in young children in place of a simpler method. The discussion on whether to operate at all in case of appendicitis, and if so, when, is apologised for by the American translators, and might well have been omitted almost entirely; we are quite of their mind that operation should follow as soon as the diagnosis is made. The old idea of intra-uterine amputations being neatly and successfully performed by amniotic bands together with the subsequent disposal of the amputated member is still, we see, accepted in the text, although it is noted that the same developmental error may affect several members of one family. Presumably in such cases the amniotic band is so skilled that it can make quite sure of snaring the same limb in the same way each time. The objection may be personal, but the terms of pronation and supination as applied to the movements of the feet seem strange to us.

In the cure of prolapse of the rectum in some children the first operative measure recommended is to "replace the prolapse and then carry a silver wire subcutaneously around the anus, and then twist the two ends together until the anal opening is of normal size." After paying a tribute to the excellent results by this and other methods, the authors state they have adopted a simpler one, "namely, a longitudinal stiffening of the rectum with bars of paraffin. This method may easily be endured by the weakest child." As in the case of umbilical hernia, we, in this country, even with the help of some enthusiasts, do not seem able to produce one twentieth the number of these cases in which we think an operation is needed or justified.

The chapter on injuries is excellent, and is the part of the book which most appeals to us, but we should be more pleased if the fractures in the region of the elbow-joint had been put up in acute flexion instead of at a right angle.

These criticisms, however, have more to do with the original authors than with the translators, who are in honour bound to give a true account of the ideas of the author, however far these may happen to be from their own convictions or experience. We therefore present our thanks to them for the production of a very readable book.

DUNCAN C. L. FITZWILLIAMS.

MENTAL DEFICIENCY. London: Adlard & Son, 1912. Price 1s. net.

THIS pamphlet of 93 pages is reprinted from the 'Journal of Mental Science,' and is a convenient compilation of various communications, reports and discussions concerning the Mental Deficiency Bill which was introduced by the Home Secretary this Session. The greater part of it consists of the very able and lucid exposition of the Bill which was given by Dr. Hyslop before the Medico-Psychological Association, together with the discussion which took place thereon. Dr. Hyslop deals with the subject under five

headings, viz.: (1) The need for legislation as evidenced by the Report of the Royal Commission. (2) Do the legislative proposals contained in the Bill ensure adequate provision for the most needful cases? (3) Is sufficient protection ensured for existing institutions for idiots and imbeciles? (4) Is the liberty of the subject adequately guarded? (5) Are the objects of the Bill reasonably attainable from the points of view of administration and economy? The discussion which followed plainly showed that although certain clauses of the Bill were in need of modification, yet expert opinion regarded it as being, on the whole, a decidedly useful measure, and one which would do not a little to protect society from the mentally deficient, as well as safeguard the interests of the mentally defectives themselves.

It is a matter for great regret that the Government have not proceeded with the measure this Session.

The other portions of the pamphlet deal with medical inspection of school-children; voluntary institutions for idiots, imbeciles, and the feeble-minded, etc., and the whole forms a useful summary of professional opinion which should certainly be read by all who are interested in this subject.

A. F. Tredgold.

Diseases of the Throat, Nose, and Ear. By W. G. Porter, M.B., B.Sc., F.R.C.S.Ed., Surgeon to the Eye, Ear, and Throat Infirmary, Edinburgh; Surgeon, Ear and Throat Department, Royal Hospital for Sick Children, Edinburgh; Aurist to the Edinburgh Royal Institute for the Education of the Deaf and Dumb. Bristol: John Wright & Sons, Ltd., 1912. With 77 illustrations, 44 of which are in colours. Price 7s. 6d. net.

This volume, which is intended for the non-specialist practitioner and senior student, contains within moderate compass an admirably clear and pleasantly written account of the diseases of the throat, nose and ear. The writer's experience among children should recommend the book to the pædiatrist, especially the pages dealing with congenital laryngeal stridor, enlarged tonsils and adenoids, and the diagnosis and treatment of otitis media. A useful appendix is given of formulæ commonly used in the specialty. The work will prove a valuable help to those seeking an introduction to oto-rhino-laryngology.

J. D. R.

Before the Doctor Comes. By Andrew Wilson, Ph.D., M.B., F.R.S.E. London: Eveleigh Nash, 1912. Pp. 278. Price 2s. 6d. net.

This is a well and simply written book, the title of which explains its scope. It deals with the subject both from a surgical and medical standpoint and gives valuable suggestions in first aid in disease and accidents. We think, however, that a good deal of the fifth chapter dealing with first aid in disease might have been omitted, as subjects such as dropsy, diabetes, cancer, tumours, pernicious anæmia, obesity, etc., can hardly be said to be considered as emergencies.

F. R. B. A.